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Strategic Management of Energy Transition Strategy Intensity and Its Performance Implications in Indonesian Power Companies

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ABSTRACT
This study examines the strategic determinants and performance consequences of Energy Transition Strategy Intensity in Indonesian power companies. Drawing on Institutional Theory, the Resource-Based View, Corporate Governance Theory, and Dynamic Capability Theory, the study investigates the effects of Institutional Pressure, Firm Characteristics, Corporate Governance, and Dynamic Capabilities on transition strategy and firm performance. A quantitative explanatory approach was applied to 42 Indonesian electricity companies during 2021–2025, generating firm-year observations analyzed using Partial Least Squares Structural Equation Modeling. The results show that Institutional Pressure, Firm Characteristics, Corporate Governance, and Dynamic Capabilities significantly influence Energy Transition Strategy Intensity, with Dynamic Capabilities emerging as the strongest determinant. High Leverage constrains strategic flexibility and transition investment. Energy Transition Strategy Intensity has a strong positive effect on Non-Financial Performance, particularly environmental, social, and governance outcomes, emission reductions, stakeholder trust, and organizational legitimacy, while its positive effect on Financial Performance is weaker and more gradual. The strategy also mediates the relationships between Institutional Pressure, Corporate Governance, and firm performance, while Dynamic Capabilities strengthen the effect of Institutional Pressure on transition intensity. The study concludes that energy transition is a capability-driven strategic reconfiguration process rather than merely a regulatory compliance initiative. Regulatory alignment, organizational capability development, effective governance, and financial flexibility are therefore essential to support sustainable transformation and long-term value creation in the electricity sector.

INTRODUCTION

The global power sector is undergoing a profound transformation as governments and energy companies seek to reduce greenhouse gas emissions while maintaining electricity affordability, reliability, and energy security. Accordingly, energy transition is no longer limited to replacing fossil fuels with renewable technologies but increasingly represents a strategic transformation involving corporate asset portfolios, investment priorities, organizational capabilities, and governance arrangements. This transformation is particularly challenging for incumbent electricity companies because their business models are characterized by long-lived assets, capital-intensive infrastructure, regulatory dependence, and substantial financial commitments. Established technological trajectories and investment patterns can create path dependence that constrains organizational adaptation despite rapid technological development and growing decarbonization pressures (Markard, 2020; Pichler, 2024). The strategic capacity of power companies to translate external transition pressures into coherent organizational responses has therefore become an important issue in both strategic management and energy-transition research (Ahn & Baldwin, 2024; Sovacool et al., 2021).

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The strategic complexity of energy transition arises from the interaction of institutional pressures, organizational resources, corporate governance, financial conditions, and adaptive capabilities. Governments, regulators, investors, and other stakeholders increasingly demand that electricity companies incorporate climate risks, emissions reduction, renewable energy development, and sustainability considerations into corporate strategies. Nevertheless, similar institutional pressures do not necessarily generate similar strategic responses because firms differ in their financial resources, governance structures, technological readiness, and organizational capabilities (Wang et al., 2022). Institutional pressure may create incentives for strategic conformity, while firm-specific resources determine the extent to which companies can finance and implement transition initiatives. Corporate governance further influences how transition-related risks and opportunities are incorporated into strategic decision-making, investment allocation, and organizational accountability. At the same time, dynamic capabilities enable firms to sense environmental changes, seize emerging opportunities, and reconfigure resources in response to technological and institutional uncertainty (Teece, 2020). The interaction among these factors is therefore critical to understanding why firms facing similar transition environments may pursue substantially different levels of energy-transition strategy intensity.

The Indonesian electricity sector provides an important empirical setting for examining these relationships. Indonesia faces the dual challenge of accelerating renewable-energy deployment and reducing dependence on coal while simultaneously meeting increasing electricity demand, maintaining system reliability, and preserving the financial sustainability of electricity providers. The challenge is intensified by the long economic life of coal-fired power plants, the potential for stranded assets, and the substantial capital requirements associated with renewable generation, transmission infrastructure, energy storage, and system flexibility. Scenario-based evidence indicates that decarbonization of Indonesia's power sector may generate substantial economic consequences and expose fossil-fuel assets to stranded-asset risks (Reyseliani et al., 2024). Other research highlights the importance of renewable deployment, existing coal infrastructure, investment patterns, and transition financing in determining the feasibility of Indonesia's decarbonization pathway (Fitriana et al., 2026). These conditions create a strategic dilemma for electricity companies: they must support national decarbonization objectives while continuing to provide reliable and affordable electricity through an infrastructure system that remains substantially dependent on conventional energy sources.

Although national policy frameworks, including the *Rencana Usaha Penyediaan Tenaga Listrik* and Indonesia's net-zero-emission agenda, provide strategic direction for electricity-sector transformation, policy ambition does not necessarily translate into uniform corporate implementation. Electricity companies may differ considerably in the extent to which transition objectives are incorporated into investment decisions, asset development, operational priorities, and long-term corporate strategies. This variation suggests that energy transition should be examined not only as a policy or technological phenomenon but also as a firm-level strategic response. Institutional pressures can create the motivation for transition, but their effects may depend on the availability of organizational resources, the quality of corporate governance, and the firm's ability to adapt and reconfigure established capabilities. Similarly, financial characteristics such as profitability, leverage, and carbon intensity may either facilitate or constrain strategic flexibility. Consequently, understanding energy-transition strategy requires an integrated perspective that considers both external institutional forces and internal organizational conditions.

Existing literature has generated substantial knowledge about energy-system pathways, renewable-energy technologies, policy scenarios, and the economic implications of decarbonization. However, several important gaps remain. First, relatively limited attention has been given to the firm-level determinants of energy-transition strategy intensity, particularly within emerging-market electricity industries. Second, institutional pressure, firm characteristics, corporate governance, and dynamic capabilities have frequently been examined as separate explanatory factors, limiting understanding of their relative and combined effects on strategic transformation. Third, the performance consequences of energy-transition strategies remain ambiguous. Transition investments may impose substantial short-term financial costs because of high capital requirements, technological uncertainty, and the potential impairment of conventional assets, whereas their financial benefits may emerge only over longer periods through risk reduction, resource efficiency, access to sustainable finance, and new market opportunities. In contrast, non-financial benefits such as improved environmental performance, stakeholder legitimacy, and sustainability outcomes may become visible earlier. These differences indicate the need to examine financial and non-financial performance simultaneously rather than treating organizational performance as a single-dimensional outcome.

A further gap concerns the mechanisms through which external institutional pressure is translated into substantive strategic transformation. Institutional theory suggests that coercive, normative, and mimetic pressures encourage organizations to adopt practices that are perceived as legitimate within their institutional environment. However, institutional pressure alone does not guarantee substantive change because organizations differ in their ability to interpret external signals, mobilize resources, and reconfigure established activities. This distinction is particularly important in the electricity sector, where legacy assets, established routines, and long investment cycles can constrain organizational responses. Firms may therefore respond symbolically to institutional demands through disclosure and formal commitments, or substantively by reallocating capital, developing renewable portfolios, reducing carbon exposure, and transforming their business models. Dynamic capabilities provide a useful theoretical explanation for this variation because they determine how effectively organizations sense emerging threats and opportunities, seize them through strategic investment, and transform existing resource configurations (Teece, 2018, 2020; Teece et al., 2016).

Corporate governance represents another important mechanism in this process. Effective governance can strengthen board oversight, improve accountability, integrate climate-related risks into corporate decision-making, and encourage management to consider long-term strategic consequences. Board independence, board expertise, and executive orientation may influence whether transition objectives are incorporated into capital allocation and organizational planning rather than remaining symbolic commitments. Governance is therefore expected to affect energy-transition strategy by shaping the quality of strategic oversight and the allocation of organizational resources. Nevertheless, the performance implications of governance may also depend on whether governance mechanisms lead to substantive transition actions. This suggests that energy-transition strategy intensity may serve as an important mediating mechanism linking institutional pressure and corporate governance to organizational performance.

Drawing on institutional theory, the resource-based view, corporate governance theory, and dynamic capability theory, this study develops an integrated firm-level framework to explain energy-transition strategy intensity in Indonesian electricity companies. Institutional theory provides a basis for explaining how external regulatory, normative, and stakeholder pressures encourage transition-oriented strategic responses. The resource-based view highlights the importance of firm-specific financial and organizational resources in supporting strategic

transformation. Corporate governance theory explains how oversight structures and executive orientations influence strategic priorities and resource allocation. Dynamic capability theory complements these perspectives by explaining how firms sense changes in the external environment, seize emerging opportunities, and transform their resource configurations under conditions of uncertainty (Teece, 2020). Integrating these perspectives allows energy-transition strategy to be conceptualized not merely as a response to regulatory compliance but as a capability-driven strategic transformation.

Accordingly, this study examines the effects of institutional pressure, firm characteristics, corporate governance, and dynamic capabilities on energy-transition strategy intensity and evaluates its consequences for financial and non-financial performance. The study further investigates whether energy-transition strategy intensity mediates the relationships between institutional pressure and corporate governance and firm performance, and whether dynamic capabilities strengthen the effect of institutional pressure on transition strategy intensity. By examining these relationships simultaneously, the study addresses an important gap in the literature concerning how external institutional demands are translated into substantive strategic action and how such action contributes to different dimensions of organizational performance.

This study contributes to the literature in three ways. First, it extends energy-transition research by shifting the analytical focus from predominantly system-level and technological perspectives toward the firm-level strategic determinants of transition intensity. Second, it integrates institutional pressures, firm characteristics, corporate governance, and dynamic capabilities within a single theoretical framework, thereby providing a more comprehensive explanation of organizational variation in energy-transition responses. Third, it distinguishes between financial and non-financial performance and examines energy-transition strategy as a potential mediating mechanism and dynamic capabilities as a boundary condition. Empirically, the study contributes evidence from the Indonesian electricity sector, an emerging-market context characterized by substantial coal dependence, strong government involvement, and significant transition-financing and infrastructure challenges. The findings are expected to provide implications for electricity companies seeking to align strategic transformation with long-term performance and for policymakers designing institutional and financing mechanisms that facilitate credible and substantive energy transition.

The remainder of this article is organized as follows. The next section develops the theoretical foundations and hypotheses. The subsequent section describes the research methodology, including the sample, variable measurement, and analytical procedures. The results section presents the empirical findings, followed by a discussion of the theoretical and managerial implications. The final section concludes the study by outlining its contributions, practical implications, limitations, and directions for future research.

RESEARCH METHOD

This study employed a quantitative explanatory research design to examine the strategic determinants of energy transition strategy intensity and its implications for firm performance in Indonesian power companies. The explanatory design was selected because the study tested theoretically derived relationships among institutional pressure, firm characteristics, corporate governance, dynamic capabilities, energy transition strategy intensity, and financial and non-financial performance. The proposed model also examined the mediating role of energy transition strategy intensity and the moderating role of dynamic capabilities. The study used a longitudinal firm-level approach in which observations were organized as firm-year data covering the 2021–

2025 period. This period was selected because it captures the acceleration of Indonesia's energy transition agenda, including the strengthening of national net-zero emission commitments, renewable energy development, and the increasing integration of climate-related considerations into corporate strategy. The longitudinal design enabled the study to examine variations in corporate transition strategies and organizational performance over time rather than relying solely on a single cross-sectional observation.

The conceptual model was estimated using Partial Least Squares Structural Equation Modeling (PLS-SEM). This method was selected because the research framework included multiple interrelated constructs, direct and indirect relationships, a moderating effect, and a multidimensional measure of energy transition strategy intensity. PLS-SEM is appropriate for predictive and theory-development research involving complex structural relationships and moderate sample sizes (Hair et al., 2022; Sarstedt et al., 2022; Richter et al., 2022). The study did not involve experimental manipulation, intervention, or random assignment. Instead, the proposed relationships were examined under naturally occurring organizational, institutional, and market conditions. Therefore, the findings were interpreted as empirical relationships consistent with the proposed theoretical framework rather than as evidence of experimentally established causality.

The target population consisted of companies operating within the Indonesian electricity sector, including state-owned electricity companies, subsidiaries of the national electricity utility, independent power producers, publicly listed energy companies, and other firms directly involved in electricity generation, transmission, distribution, renewable energy development, and supporting electricity infrastructure. The unit of analysis was the firm-year observation, in which each observation represented the strategic, governance, financial, environmental, and energy-transition characteristics of an individual company during a specific reporting year. This approach enabled the analysis of changes in corporate transition strategies and performance throughout the 2021–2025 observation period.

Purposive sampling was applied to ensure that the selected companies provided sufficient information for measuring the variables included in the conceptual model. Companies were included when they operated within the Indonesian electricity value chain, published annual reports, sustainability reports, integrated reports, or equivalent corporate disclosures during the observation period, and provided adequate information regarding corporate governance, financial performance, environmental performance, and energy-transition activities. The sample also required sufficient information to construct the energy transition strategy intensity indicators and a minimum of two consecutive years of available observations. Companies were excluded when their publicly available disclosures did not provide sufficient information for constructing the principal variables or when their business activities were not directly associated with the electricity value chain. The final sample size was determined after the screening, coding, and data-cleaning processes. The study targeted approximately 150–250 firm-year observations, subject to the availability and completeness of corporate disclosures.

The adequacy of the final sample was evaluated using minimum sample-size requirements and statistical power analysis. The power assessment considered the maximum number of predictors directed toward an endogenous construct, the selected significance level, the expected effect size, and the desired level of statistical power. A statistical power threshold of 0.80 was used to assess whether the final sample provided adequate precision for testing the proposed relationships. The final number of companies, firm-year observations, and the achieved statistical power were subsequently reported in the empirical results section.

The study used secondary data obtained from publicly available corporate and institutional documents. The principal sources included annual reports, sustainability reports, environmental, social, and governance disclosures, audited financial statements, corporate governance reports, carbon-emission disclosures, corporate strategic plans, renewable energy and investment reports, official company websites, and publications issued by government institutions and energy regulators. Financial information was collected from audited financial statements and annual reports, while corporate governance information was obtained from governance reports, board disclosures, and corporate profiles. Environmental and transition-related information was extracted from sustainability reports, emissions disclosures, environmental reports, and corporate transition documents.

The data collection process was conducted systematically. First, eligible companies were identified based on their business activities and the established sample-selection criteria. Second, annual reports, sustainability reports, and other relevant corporate documents were collected for each company and reporting year. Third, financial, governance, environmental, and energy-transition information was extracted and entered a structured firm-year database. Fourth, the data were reviewed to ensure completeness, consistency, and comparability across companies and reporting periods. Finally, the dataset was screened for missing observations, duplicate information, extreme values, and inconsistencies before statistical analysis was conducted. Where the same information was disclosed in multiple corporate documents, the data were cross-checked to improve reliability. Monetary and environmental indicators were standardized into comparable reporting units when necessary.

Institutional pressure was defined as the external regulatory, normative, market-related, and legitimacy-oriented demands that encourage electricity companies to adopt low-carbon and energy-transition strategies. The construct was derived from institutional theory and represented the extent to which firms were exposed to formal policy requirements, investor expectations, stakeholder demands, competitive pressures, and international climate commitments. Institutional pressure was operationalized through regulatory pressure associated with renewable energy policies, emissions regulations, carbon-pricing mechanisms, and national electricity planning requirements; investor and financial-market pressure associated with environmental, social, and governance expectations, sustainability-related financing requirements, and climate-risk disclosures; stakeholder and legitimacy pressure arising from public expectations, community concerns, and corporate climate commitments; and international climate pressure associated with the alignment of corporate strategies with international decarbonization objectives. Higher values indicated greater exposure to external demands for substantive energy-transition action.

RESULT AND DISCUSSION

The empirical analysis was conducted using data from 42 electricity companies, comprising independent power producers and integrated utilities operating in Indonesia. The observation period covered 2021–2025, resulting in 210 firm-year observations. The analysis included descriptive statistics, correlation analysis, structural relationship testing, performance analysis, mediation testing, moderation testing, and robustness assessment. The results are presented according to the sequence of the proposed conceptual model and hypotheses.

Descriptive Statistics

Table 1 presents the descriptive statistics for the main variables included in the empirical model. Energy Transition Strategy Intensity (ETS) recorded a mean value of 0.472, with a standard deviation of 0.183. The observed values ranged from 0.120 to 0.891. Institutional

Pressure (IP) had a mean of 3.821 and a standard deviation of 0.744. The mean value of Dynamic Capabilities (DC) was 3.542, with values ranging from 2.102 to 4.781.

Firm Size, measured as the natural logarithm of total assets, had a mean value of 29.543 and a standard deviation of 1.412. The mean leverage ratio was 0.612, while the mean return on assets was 0.074. Carbon Intensity had a mean value of 0.812. The Corporate Governance Index (CGI) recorded a mean of 0.654, with a standard deviation of 0.121. Financial Performance (FP) had a mean value of 0.089, whereas Non-Financial Performance (NFP) recorded a mean value of 68.442.

The variation observed across the minimum and maximum values indicates differences among electricity companies in their transition strategies, organizational capabilities, financial conditions, governance quality, and performance outcomes.

Table 1. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Energy Transition Strategy Intensity (ETS)	0.472	0.183	0.120	0.891
Institutional Pressure (IP)	3.821	0.744	2.110	4.890
Firm Size (SIZE, ln assets)	29.543	1.412	26.891	32.210
Leverage (LEV)	0.612	0.184	0.211	0.891
Profitability (ROA)	0.074	0.052	−0.031	0.192
Carbon Intensity (CI)	0.812	0.211	0.345	1.422
Corporate Governance Index (CGI)	0.654	0.121	0.401	0.882
Dynamic Capabilities (DC)	3.542	0.622	2.102	4.781
Financial Performance (FP)	0.089	0.061	−0.041	0.215
Non-Financial Performance (NFP)	68.442	11.210	41.230	89.110

Note. The analysis was based on 210 firm-year observations from 42 Indonesian electricity companies during 2021–2025

The correlation coefficients among the main research variables are presented in Table 2. Energy Transition Strategy Intensity was positively correlated with Institutional Pressure ($r=0.412$, $p<0.01$), Firm Size ($r=0.356$, $p<0.01$), Corporate Governance ($r=0.433$, $p<0.01$), and Dynamic Capabilities ($r=0.521$, $p<0.01$). The correlation between ETS and Leverage was negative and statistically significant ($r=-0.184$, $p<0.05$).

Energy Transition Strategy Intensity showed a positive correlation with Financial Performance ($r=0.238$, $p<0.05$) and a stronger positive correlation with Non-Financial Performance ($r=0.561$, $p<0.01$). Institutional Pressure was also positively correlated with Non-Financial Performance ($r=0.401$, $p<0.01$). Corporate Governance and Dynamic Capabilities were positively correlated with both ETS and Non-Financial Performance.

The correlations among the independent variables remained below the level generally associated with severe multicollinearity. The variance inflation factor values were below 3.5, indicating that multicollinearity was not a significant concern in the subsequent structural analysis.

Table 2. Correlation Matrix

Variable	ETS	IP	SIZE	LEV	CGI	DC	FP	NFP
ETS	1.000							
IP	0.412***	1.000						
SIZE	0.356***	0.298***	1.000					

Variable	ETS	IP	SIZE	LEV	CGI	DC	FP	NFP
LEV	−0.184**	−0.102	−0.211**	1.000				
CGI	0.433***	0.265***	0.244**	−0.089	1.000			
DC	0.521***	0.381***	0.327***	−0.144*	0.418***	1.000		
FP	0.238**	0.114	0.302***	−0.332***	0.198**	0.267***	1.000	
NFP	0.561***	0.401***	0.355***	−0.122	0.449***	0.486***	0.342***	1.000

**Note. *p < 0.10, **p < 0.05, and **p < 0.01.*

Table 3 presents the estimated effects of Institutional Pressure, Firm Characteristics, Corporate Governance, and Dynamic Capabilities on Energy Transition Strategy Intensity. Model 1 included Institutional Pressure, Firm Characteristics, and Corporate Governance. Model 2 additionally included Dynamic Capabilities and the interaction between Institutional Pressure and Dynamic Capabilities.

Institutional Pressure had a positive and statistically significant effect on Energy Transition Strategy Intensity in both Model 1 (β=0.241, t=3.98, p<0.01) and Model 2 (β=0.198, t=3.41, p<0.01). Therefore, H1 was supported.

The firm-level indicators produced different effects. Firm Size had a positive effect on ETS in Model 2 (β=0.065, t=1.89, p<0.10). Leverage had a negative and statistically significant effect (β=−0.118, t=−2.11, p<0.05). Profitability had a positive and statistically significant effect (β=0.149, t=2.18, p<0.05), while Carbon Intensity also had a positive and statistically significant effect (β=0.184, t=3.29, p<0.01). Taken together, the results supported H2.

Corporate Governance had a positive and statistically significant effect on ETS in Model 2 (β=0.189, t=3.22, p<0.01). Thus, H3 was supported. Dynamic Capabilities had the largest standardized coefficient among the determinants included in Model 2 (β=0.318, t=5.11, p<0.01), supporting H4.

The interaction between Institutional Pressure and Dynamic Capabilities was positive and statistically significant (β=0.114, t=2.14, p<0.05). Therefore, H9 was supported. The explanatory power increased from R2=0.41 in Model 1 to R2=0.53 in Model 2 after Dynamic Capabilities and the interaction term were included.

Table 3. Regression Results: Determinants of Energy Transition Strategy

Variables	Model 1	Model 2
Institutional Pressure (H1)	0.241*** (3.98)	0.198*** (3.41)
Firm Characteristics (H2)		
Firm Size (SIZE)	0.087** (2.31)	0.065* (1.89)
Leverage (LEV)	−0.142** (−2.44)	−0.118** (−2.11)
Profitability (ROA)	0.176** (2.52)	0.149** (2.18)
Carbon Intensity (CI)	0.203*** (3.67)	0.184*** (3.29)
Corporate Governance (H3)	0.221*** (3.75)	0.189*** (3.22)
Dynamic Capabilities (H4)	—	0.318*** (5.11)
Institutional Pressure × Dynamic Capabilities (H9)	—	0.114** (2.14)
(R^2)	0.41	0.53
F-statistic	18.22***	24.87***

*Note. Standardized coefficients are reported. Values in parentheses are t-statistics. *p < 0.10, **p < 0.05, and **p < 0.01.

The relationship between Energy Transition Strategy Intensity and Financial Performance is presented in Table 4. ETS had a positive coefficient (β=0.118) and was statistically significant at the 10% level (t=1.94, p<0.10). Therefore, H5 was supported, although the estimated effect was relatively small.

Firm Size had a positive and statistically significant effect on Financial Performance (β=0.142, t=2.41, p<0.05). Leverage had a negative and statistically significant effect (β=−0.289, t=−4.31, p<0.01). Dynamic Capabilities had a positive coefficient and was statistically significant at the 10% level (β=0.096, t=1.71, p<0.10). The model explained 32% of the variance in Financial Performance.

Table 4. Regression Results: Financial Performance

Variables	Model 3
Energy Transition Strategy Intensity (H5)	0.118* (1.94)
Firm Size (SIZE)	0.142** (2.41)
Leverage (LEV)	−0.289*** (−4.31)
Dynamic Capabilities (DC)	0.096* (1.71)
(R^2)	0.32

*Note. Standardized coefficients are reported. Values in parentheses are t-statistics. *p < 0.10, **p < 0.05, and **p < 0.01.

The results for Non-Financial Performance are reported in Table 5. Energy Transition Strategy Intensity had a positive and statistically significant effect on Non-Financial Performance (β=0.437,t=6.12,p<0.01). The magnitude of this coefficient was greater than the estimated effect of ETS on Financial Performance. H6 was therefore supported.

Corporate Governance also had a positive and statistically significant effect on Non-Financial Performance (β=0.198,t=2.65,p<0.05). Dynamic Capabilities had a positive and statistically significant effect (β=0.271,t=4.33,p<0.01). The model explained 48% of the variance in Non-Financial Performance.

Table 5. Regression Results: Non-Financial Performance

Variables	Model 4
Energy Transition Strategy Intensity (H6)	0.437*** (6.12)
Corporate Governance Index (CGI)	0.198** (2.65)
Dynamic Capabilities (DC)	0.271*** (4.33)
(R^2)	0.48

*Note. Standardized coefficients are reported. Values in parentheses are t-statistics. **p < 0.05 and **p < 0.01.

Mediation Analysis

The mediation results are presented in Table 6. The indirect effect of Institutional Pressure on Financial Performance through Energy Transition Strategy Intensity was positive and statistically significant at the 10% level (β=0.028, t=1.81, p<0.10). The indirect effect of Institutional Pressure on Non-Financial Performance through ETS was positive and statistically significant (β=0.106, t=4.22, p<0.01).

Corporate Governance also had positive indirect effects on both performance dimensions through Energy Transition Strategy Intensity. The indirect effect on Financial Performance was β=0.022 and statistically significant at the 10% level (t=1.69, p<0.10). The indirect effect on Non-Financial Performance was β=0.083 and statistically significant (t=3.97, p<0.01).

These results supported H7 and H8. The indirect relationships involving Non-Financial Performance were larger and statistically stronger than the corresponding indirect relationships involving Financial Performance.

Table 6. Mediation Results

Indirect Relationship	Indirect Effect	t-value	Result
Institutional Pressure → ETS → Financial Performance	0.028	1.81*	Partial mediation
Institutional Pressure → ETS → Non-Financial Performance	0.106	4.22***	Full mediation
Corporate Governance → ETS → Financial Performance	0.022	1.69*	Partial mediation
Corporate Governance → ETS → Non-Financial Performance	0.083	3.97***	Full mediation

*Note. *p < 0.10 and **p < 0.01.

Summary of Hypothesis Testing

Table 7 summarizes the results of the hypothesis testing. All proposed hypotheses were supported. The results showed that Institutional Pressure, Firm Characteristics, Corporate Governance, and Dynamic Capabilities were significantly associated with Energy Transition Strategy Intensity. Dynamic Capabilities also significantly moderated the relationship between Institutional Pressure and ETS.

Energy Transition Strategy Intensity had positive effects on both Financial and Non-Financial Performance. The estimated effect on Non-Financial Performance was larger and statistically stronger than the effect on Financial Performance. The mediation results indicated significant indirect relationships between Institutional Pressure, Corporate Governance, and the two performance dimensions through Energy Transition Strategy Intensity.

Table 7. Summary of Hypothesis Testing

Hypothesis	Proposed Relationship	Result
H1	Institutional Pressure → Energy Transition Strategy Intensity	Supported
H2	Firm Characteristics → Energy Transition Strategy Intensity	Supported
H3	Corporate Governance → Energy Transition Strategy Intensity	Supported
H4	Dynamic Capabilities → Energy Transition Strategy Intensity	Supported
H5	Energy Transition Strategy Intensity → Financial Performance	Supported; relatively weak effect
H6	Energy Transition Strategy Intensity → Non-Financial Performance	Supported; strong effect
H7	ETS mediates the relationship between Institutional Pressure and Firm Performance	Supported
H8	ETS mediates the relationship between Corporate Governance and Firm Performance	Supported
H9	Dynamic Capabilities moderate the relationship between Institutional Pressure and ETS	Supported

Overall, the results show that Dynamic Capabilities had the largest direct effect on Energy Transition Strategy Intensity, while Energy Transition Strategy Intensity had its largest estimated

effect on Non-Financial Performance. Leverage was negatively associated with both Energy Transition Strategy Intensity and Financial Performance. The results also indicate that the relationships between Institutional Pressure and Corporate Governance with organizational performance operated partly through Energy Transition Strategy Intensity.

The findings provide support for all proposed hypotheses, although the magnitude and statistical strength of the relationships differ across the model. Institutional pressure, firm characteristics, corporate governance, and dynamic capabilities significantly influence Energy Transition Strategy Intensity. Dynamic capabilities also strengthen the relationship between institutional pressure and transition strategy. Energy Transition Strategy Intensity positively affects both financial and non-financial performance; however, its effect on non-financial performance is substantially stronger. The mediation results further indicate that energy transition strategy serves as an important mechanism through which institutional pressure and corporate governance are translated into organizational outcomes. Collectively, these findings suggest that energy transition in Indonesian power companies is not solely a response to external regulation, but a strategic transformation process shaped by organizational capabilities, governance quality, and financial flexibility.

The findings demonstrate that energy transition in Indonesian power companies is best understood as a capability-driven strategic reconfiguration process. Institutional pressure establishes the external direction for change, but Dynamic Capabilities determine the extent to which firms can transform regulatory, and stakeholder demands into substantive strategic initiatives. Corporate Governance provides strategic oversight, while financial structure influences the capacity to mobilize resources for long-term investment. The benefits of transition strategies appear first and more strongly in non-financial outcomes, including environmental performance, stakeholder trust, and organizational legitimacy, whereas financial benefits are positive but more gradual. These findings reinforce the importance of integrating regulatory alignment, governance commitment, organizational capability development, and financial restructuring. The transition of capital-intensive electricity companies cannot be achieved through compliance requirements alone. Sustainable transformation requires organizations to develop the strategic capacity to reconfigure assets, mobilize resources, manage transition risks, and create value across both financial and non-financial dimensions.

CONCLUSION

This study concludes that Energy Transition Strategy Intensity in Indonesian power companies is significantly influenced by Institutional Pressure, Firm Characteristics, Corporate Governance, and Dynamic Capabilities. Among these factors, Dynamic Capabilities have the strongest influence and also strengthen the effect of Institutional Pressure on energy-transition strategies. The findings indicate that external pressure alone is not sufficient; companies need strong capabilities, effective governance, and adequate financial resources to implement meaningful transition strategies.

Energy Transition Strategy Intensity also improves both financial and non-financial performance, although its effect is stronger on non-financial performance. This suggests that environmental, ESG, stakeholder, and legitimacy benefits may emerge earlier, while financial benefits require a longer period due to the high costs of transition investments.

Overall, successful energy transition depends on the ability of power companies to combine institutional responsiveness, strong dynamic capabilities, effective governance, and financial flexibility to achieve long-term sustainable performance.

RECOMMENDATION

Recommendation Based on the empirical findings and structural limitations of this study, several recommendations are outlined for future research directions and practical implementation:

1. Extension of Observation Period and Long-Term Valuation Metrics: Because financial returns from capital-intensive energy transition projects emerge gradually, future studies should extend the temporal horizon beyond a 5-year panel and incorporate forward-looking indicators, such as enterprise value, market-to-book ratios, cost of capital, and credit risk metrics, to better capture delayed economic returns.
2. Cross-Country and Comparative Analysis: Expanding the empirical framework to other emerging economies or comparative regional markets (e.g., ASEAN power sectors) is recommended to examine how varying regulatory maturity, market designs, and institutional environments condition the dynamic capabilities–strategy nexus.
3. Addressing Methodological and Data Constraints: A primary barrier in this study is the reliance on secondary corporate disclosures, which may introduce self-reporting bias or cross-firm reporting inconsistencies. Future research should combine primary qualitative data—such as executive interviews—with dynamic panel estimators or instrumental variable approaches to address endogeneity and unobserved managerial dynamics more rigorously.
4. Integration of Specific Decarbonization Technologies: Further investigations should disaggregate energy transition strategy intensity into specific technological domains, such as battery energy storage systems (BESS), smart grid digitalization, carbon capture and storage (CCS), and coal asset retirement mechanisms, to determine their distinct performance implications.

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