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The Role Of Independent Commissioners In Overseeing Investment Decisions: A Good Corporate Governance Review In The Extractive Sector

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Abstract
This study discusses the role of independent commissioners in supervising investment decisions in Indonesian extractive sector companies based on the perspective of Good Corporate Governance (GCG). The study focuses on green capital budgeting, especially reclamation provisions that are required by regulation. Using a systematic literature review method, this study analyzes 31 verified sources, including journal articles, official data, and government regulations published between 2020 and 2026. The results show three main findings. First, agency theory and the triple bottom line framework can be used to explain the importance of independent commissioner supervision. Agency theory explains the risk of information gaps between management and stakeholders, while the triple bottom line highlights the economic, environmental, and social responsibilities of companies. Second, independent commissioners supervise investment decisions through strategic evaluation, monitoring, advisory roles, and accountability reporting. Their effectiveness depends more on active governance involvement than on the number of independent commissioners. Third, reclamation provision adequacy can be used as a new indicator to measure the quality of green capital budgeting in the extractive sector. This study contributes to the Good Corporate Governance literature by linking agency theory, triple bottom line, independent commissioner oversight, and green investment decisions in the Indonesian extractive sector. It also provides a basis for future empirical research on the relationship between reclamation provisions, independent commissioners, and firm value.

INTRODUCTION

Indonesia's extractive sector plays a central role in the national economy, with 89 companies listed under IDXENERGY and 114 companies under IDXBASIC on the Indonesia Stock Exchange as of end-2024 (Bursa Efek Indonesia, 2024). In 2024, non-tax state revenues from the mineral and coal subsector reached Rp140.486 trillion, equivalent to 123.70% of the initial target, reflecting the sector's continued fiscal significance (Kementerian ESDM, 2024). However, this economic contribution carries substantial environmental obligations: companies are legally required to set aside reclamation guarantee funds throughout their operational life, with nationally accumulated funds reaching approximately Rp35 trillion as of September 2025 (Kementerian ESDM, 2025). These reclamation provisions represent mandatory green capital allocations whose adequacy depends directly on the quality of internal investment oversight. Indonesia's updated Second Nationally Determined Contribution (SNDC) further intensifies these obligations, committing to peak national emissions by 2030 at levels 8% to 17.5% below the Enhanced NDC scenario, placing structural pressure on extractive companies to integrate environmental considerations into their long-term capital allocation decisions (Pemerintah Republik Indonesia, 2021).

Agency theory provides the foundational lens for understanding why investment oversight matters in this context. The separation of ownership and control in publicly listed extractive companies creates conditions in which managers, possessing superior information about project economics, reserve estimates, and environmental costs, may pursue investment decisions that serve their personal interests at the expense of shareholders (Ardianto et al., 2021). This information asymmetry generates two forms of investment distortion that are particularly relevant in the extractive sector: overinvestment in commercially visible projects that underfund mandatory environmental obligations, and underinvestment in reclamation activities whose costs are immediate but whose regulatory and reputational consequences are deferred (Bhullar & Gupta, 2024; Risdiawan et al., 2024). The triple bottom line framework, as applied by Li et al. (2026) to the business-environment-performance nexus in emerging market economies, complements agency theory by establishing that investment decisions in resource-intensive industries must simultaneously satisfy economic, environmental, and social performance criteria, all three of which are legally mandated in the Indonesian extractive sector through Government Regulation No. 78 of 2010, Law No. 3 of 2020, and the SNDC commitments (Pemerintah Republik Indonesia, 2010; 2020; 2021).

Good Corporate Governance (GCG) is the primary institutional mechanism for addressing these agency problems. OJK Regulation No. 33/POJK.04/2014 mandates a minimum of 30% independent commissioners on the boards of publicly listed companies, and data from the Indonesia Stock Exchange confirms that formal compliance with this threshold has been achieved by nearly all mining companies in the sample population (Otoritas Jasa Keuangan, 2014; Bursa Efek Indonesia, 2024). However, formal compliance does not guarantee effective oversight. Santosa, Setianingrum, and Yusuf (2022), studying LQ-45 companies on the IDX for 2014-2019, found that independent commissioners did not significantly influence firm value individually. In a related context, Sudirman and Al Sandi (2021) demonstrated that financial decision quality, specifically capital structure and growth decisions, significantly influences firm value in Indonesian listed companies, establishing that the pathway from governance to value operates through the quality of capital allocation decisions rather than governance structure alone.

Fitriyani, Rely, and Sari (2025), examining energy sector companies on the IDX for 2019-2023, similarly found that independent commissioners did not significantly influence firm value on a partial basis, with the model's Adjusted R^2 of only 39.8% indicating that 60.2% of firm value variation remained unexplained. Internationally, Mishra, Patro, and Tiwari (2024) and Chancharat, Vetchagool, and Chancharat (2026) found that board independence moderates the sustainability-firm value relationship in emerging markets, but only when governance engagement, measured by board meeting frequency and board expertise, is sufficiently active. These findings collectively suggest that independent commissioners generate governance value not through their structural presence alone, but through the quality of their engagement in overseeing the investment decisions through which firm value is created or destroyed.

From the systematic review conducted in this study, two evidence-based gaps emerge. First, existing Indonesian studies have tested the direct effect of independent commissioners on firm value and found inconsistent results (Santosa et al., 2022; Fitriyani et al., 2025; Masyadi et al., 2021), yet neither has examined independent commissioners as a mechanism operating through the intermediate channel of investment decision quality. Fitriyani et al. (2025) and Masyadi et al. (2023) explicitly acknowledge the unexplained 60.2% of firm value variation and call for exploration of additional mediating or moderating variables. Second, Risdiawan et al. (2024), in their bibliographic review of 30 investment efficiency studies in Indonesia, explicitly recommend that future research employ governance factors as moderating variables in the investment-performance relationship and conduct in-depth analysis of companies experiencing overinvestment or underinvestment, a recommendation that directly points toward the research design this study conceptually develops.

Neither recommendation has been addressed in the existing literature with respect to the extractive sector's mandatory green capital obligations, specifically reclamation provisions as a form of legally mandated green capital budgeting. This study therefore pursues three objectives: to establish the theoretical foundation linking independent commissioner oversight to investment decision quality in the Indonesian extractive sector; to analyze the mechanisms through which independent commissioners oversee mandatory green capital investment decisions including reclamation provisions; and to propose a conceptual framework for future empirical investigation into the governance-investment quality-firm value relationship. Theoretically, this study integrates agency theory (Ardianto et al., 2021; Risdiawan et al., 2024) and the triple bottom line framework (Li et al., 2026; Andi Sudirman et al., 2024), a combination not previously developed in the Indonesian GCG literature, and proposes reclamation provision adequacy as a novel and sector-appropriate proxy for green capital budgeting quality, filling the gap identified by Dwiharto and Kurniasih (2023).

METHOD

This study employs a systematic literature review (SLR) methodology to develop a conceptual framework examining the role of independent commissioners in overseeing investment decisions in Indonesian extractive sector companies. The SLR approach was selected because it enables rigorous and transparent synthesis of existing theoretical and empirical knowledge, minimizes selection bias through explicit inclusion and exclusion criteria, and is methodologically appropriate for studies whose primary objective is conceptual framework development and research gap identification (Bhullar & Gupta, 2024; Risdiawan et al., 2024).

Data Sources and Search Strategy

Literature was sourced from three categories: peer-reviewed journal articles from Google Scholar, the SINTA portal, and Scopus; official statistical and regulatory data from the Indonesia Stock Exchange, BPS, and the Ministry of Energy and Mineral Resources; and government regulations directly governing corporate governance and extractive sector environmental obligations in Indonesia. The search employed keywords including *independent commissioner*, *good corporate governance*, *investment decision*, *green capital budgeting*, *reclamation provision*, *extractive sector*, *firm value*, and *agency theory*, applied individually and in combination in both English and Indonesian.

Inclusion and Exclusion Criteria

Explicit inclusion and exclusion criteria were established prior to the search process to ensure the relevance and quality of the reviewed literature. Table 1 presents these criteria in full.

Table 1. Inclusion and Exclusion Criteria for Literature Selection

Criteria	Inclusion	Exclusion
Publication Period	2019-2025	Before 2019 (except foundation theories)
Language	English and Indonesian	Other languages
Journal type	SINTA accredited (S1–S2) and Scopus indexed	Non-indexed or non-accredited journals
Topic relevance	GCG, independent commissioner, investment decision, extractive sector, firm value	Unrelated topics
Document type	Research articles and review articles	Theses, dissertations, conference papers
Accessibility	Full text available	Abstract only

A total of 47 articles were initially identified. After applying inclusion and exclusion criteria and verifying each article from its original PDF source, 21 peer-reviewed articles were retained. Combined with four official data sources and four government regulations, the final evidence base comprises 31 verified sources. Thematic synthesis was applied to analyze each article across six dimensions: research objectives and theoretical framework; key variables and measurement proxies; research context and sample characteristics; methodology; principal findings; and research gaps and recommendations identified by the authors.

Data Analysis Procedure

The 21 peer-reviewed articles were analyzed using thematic synthesis. Each article was coded across six dimensions: research objectives and theoretical framework; key variables and their measurement proxies; research context and sample characteristics; methodology employed; principal findings per hypothesis; and research gaps and recommendations for future study identified by the authors. This coding process was applied directly to the original PDF of each article rather than to secondary summaries, ensuring accuracy of extraction. The coded data was organized into a structured literature review matrix that facilitated systematic cross-article comparison and pattern identification.

Profile of Reviewed Literature

The 29 sources retained for this study were distributed across five categories as presented in Table 2. This distribution reflects the multidisciplinary nature of the study's theoretical and empirical scope, spanning corporate governance, green capital budgeting, investment efficiency, sustainability reporting, and the regulatory and statistical context of the Indonesian extractive sector.

Table 2. Distribution of Reviewed Articles by Theme

No	Category	Number of Sources	Representative Sources
1	Corporate Governance & Firm Value-Indonesian Context	7	Santosa et al. (2022); Ramadhan et al. (2022); Fitriyani et al. (2025); Karsam et al. (2022)
2	Investment Decision, Efficiency & GCG	5	Ardianto et al. (2021); Bhullar & Gupta (2024); Risdiawan et al. (2024); Alkaraan et al. (2023)
3	Green Investment, Green Capital Budgeting & Sustainability	5	Dwiharto & Kurniasih (2023); Tanasya & Handayani (2020); Sukmadilaga et al. (2023); Li et al. (2026)
4	International GCG & Emerging Market Evidence	4	Mishra et al. (2024); Khan et al. (2023); Chancharat et al. (2026); Fujianti et al. (2024)
5	Official Data Sources & Government Regulations	8	BEI (2024); BPS (2024); Kementerian ESDM (2024; 2025); OJK (2014); PP No. 78/2010; UU No. 3/2020; LTS-LCCR 2050
	Total	**29**	

Result And Discussion

Theoretical Foundation: Agency Theory and Triple Bottom Line Framework

Investment decision-making in Indonesian extractive sector companies requires an integrated theoretical framework that combines agency theory with the triple bottom line (TBL) framework. Agency theory establishes that information asymmetry between managers and shareholders creates systematic incentives for investment distortion, both overinvestment in commercially visible projects that underfund mandatory environmental obligations, and underinvestment in reclamation activities whose regulatory consequences are deferred (Ardianto et al., 2021; Risdiawan et al., 2024). In the extractive sector, this distortion is particularly consequential given the irreversibility of capital commitments and the multi-decade time horizons of reclamation obligations.

The TBL framework, as applied by Li et al. (2026) to the business-environment-performance nexus in emerging market economies, extends this analysis by establishing that investment decisions must simultaneously satisfy economic, environmental, and social performance criteria, all three of which are legally mandated in the Indonesian extractive sector. Karsam et al. (2022), studying mining companies on the IDX for 2011-2021, demonstrated that governance mechanisms significantly influence sustainability report disclosure, which in turn affects financial performance and firm value through a chain of mediated effects, providing empirical support for the TBL pathway in the Indonesian extractive context.

Table 3. Integrated Theoretical Framework: Agency Theory and TBL in the Indonesian Extractive Sector

Theoretical Element	Agency Theory Contribution	TBL Framework Contribution	Application in Indonesian Extractive Sector
Core problem	Principal-agent conflict in investment decisions	Simultaneous economic, environmental, and social obligations	Managers may underfund reclamation to maximize short-term financial performance
Information asymmetry	Managers possess more information regarding investment quality	Stakeholders cannot independently verify TBL compliance	Reclamation provision adequacy is not transparently verifiable without governance oversight
Governance solution	Internal monitoring mechanisms reduce agency costs	Board-level oversight ensures TBL integration in investment planning	Independent commissioners oversee both capital expenditure decisions and reclamation provision adequacy
Value creation pathway	Reduced agency costs → improved investment efficiency → firm value	TBL compliance → sustainability disclosure → investor confidence → firm value	Effective investment oversight → adequate reclamation provisions → reduced regulatory risk → firm value
Key theoretical references	Ardianto et al. (2021); Risdiawan et al. (2024)	Li et al. (2026); Dwiharto & Kurniasih (2023)	Santosa et al. (2022); Fitriyani et al. (2025); Karsam et al. (2022)

Independent Commissioner Oversight Mechanisms and Empirical Evidence

Independent commissioners exercise their oversight mandate over investment decisions through four complementary mechanisms: strategic evaluation of investment proposals, ongoing monitoring of investment execution and environmental compliance, advisory input on long-term capital allocation, and accountability reporting to shareholders and regulators. The effectiveness of these mechanisms, however, is contingent on governance engagement quality rather than formal structural compliance alone. The empirical evidence from Indonesian studies reviewed in this research consistently demonstrates that the formal proportion of independent commissioners does not independently and significantly predict firm value (Santosa et al., 2022; Fitriyani et al., 2025), while engagement-based governance measures produce more consistent effects.

Ramadhan, Pangestuti, and Wisesa (2022) found that board meeting frequency significantly and positively influences firm value in non-financial IDX companies, while Karsam et al. (2022) (Aini et al., 2025)demonstrated that governance meeting frequency drives sustainability disclosure quality in mining companies a finding directly relevant to the reclamation oversight mandate of independent commissioners in the extractive sector. Bhullar and Gupta (2024), synthesizing 154 Scopus-indexed articles, identified board engagement characteristics as more consistent predictors of investment efficiency than structural composition variables, reinforcing the importance of measuring governance effectiveness through engagement proxies rather than through structural presence alone.

International evidence further contextualizes these findings. Alkaraan et al. (2023), studying 2,100 firm-year observations from UK FTSE All-Share companies, demonstrated that governance mechanisms significantly moderate sustainable strategic investment decision-making and financial performance. Mishra et al. (2024) and Chancharat et al. (2026) confirmed board independence as a significant moderator of the sustainability-firm value relationship in emerging markets, with effectiveness amplified by higher board meeting frequency. The finding of Khan et al. (2023)(Andi Sudirman et al., 2024) that corporate governance moderation is significant in Malaysia but not significant in Indonesia for voluntary green innovation introduces an important boundary condition: governance moderation effectiveness in Indonesia may be context-dependent, suggesting that mandatory regulatory contexts such as the reclamation obligation framework may produce different governance effectiveness outcomes than voluntary sustainability activities. Table 4 synthesizes the empirical evidence from reviewed Indonesian studies.

Table 4. Empirical Evidence on Independent Commissioner Effectiveness in the Indonesian Context

Study	Context	Governance Variable	Finding	Implication for Investment Oversight
Santosa et al. (2022)	LQ-45 non-financial companies, IDX 2014-2019	Independent commissioner count	Not significant →firm value (PBV)	Formal presence insufficient; structural independence does not automatically produce effective oversight
Fitriyani et al. (2025)	Energy sector emitens, IDX 2019-2023	Independent commissioner proportion	Not significant partially; significant simultaneously	Oversight effectiveness is contingent on interaction with other governance and investment variables
Ramadhan et al. (2022)	Non-financial companies, IDX 2017-2019	Board meeting frequency	Significant positive →firm value (Tobin's Q)	Active oversight engagement measured by meeting frequency matters more than formal composition

Karsam et al. (2022)	Mining companies, IDX 2011-2021	Board of directors and audit committee meeting frequency	Significant →sustainability disclosure →financial performance →firm value	Governance engagement drives sustainability reporting quality in extractive sector
Tanasya & Handayani (2020)	SRI-KEHATI Index companies, IDX 2014-2018	Independent commissioner as CG proxy	Not significant directly; significant through profitability mediation	Green investment-to-value pathway requires profitability as mediator; governance enables but does not directly drive
Risdiawan et al. (2024)	Review of 30 investment efficiency studies, Indonesia 2015-2023	Governance factors including commissioner effectiveness	Governance positively influences investment efficiency	Calls for governance factors as moderators in investment-performance relationships

Green Capital Budgeting, Reclamation Provisions, and the Proposed Conceptual Framework

The concept of green capital budgeting the allocation of capital to investments that address environmental obligations alongside commercial objectives is grounded in the broader capital budgeting framework that evaluates long-term investment decisions based on their capacity to generate sustainable returns (Aini et al., 2026). In the Indonesian extractive sector, Dwiharto and Kurniasih (2023) demonstrated the financial viability of green capital budgeting in post-mining programs, finding positive NPV of Rp21.42 billion, IRR of 21% exceeding the weighted average cost of capital of 11.2%, and Profitability Index of 1.4 confirming that green capital investments are not inherently value-destroying when properly evaluated. What Dwiharto and Kurniasih (2023) did not examine is the governance mechanism determining whether such decisions are made adequately and on time the gap this study addresses.

Under Government Regulation No. 78 of 2010, extractive companies must calculate, report, and deposit reclamation guarantee funds annually throughout each mining site's operational life (Pemerintah Republik Indonesia, 2010). The adequacy of these provisions whether deposited funds accurately reflect actual future restoration costs is a function of both technical cost estimation accuracy and governance oversight quality. Sukmadilaga et al. (2023)(Masyadi et al., 2025) established that green accounting practices significantly relate to firm value in ASEAN countries, and Mahaputra and Saputra (2024) confirmed that appropriate capital budgeting decision-making significantly and positively influences long-term firm performance together establishing reclamation provision adequacy as a value-relevant indicator whose relationship with firm value is theoretically expected to be moderated by independent commissioner oversight quality.

Based on the synthesis of the theoretical and empirical literature reviewed in this study, Figure 3 presents the proposed conceptual framework positioning independent commissioner characteristics as a moderating mechanism in the relationship between green capital budgeting quality proxied by reclamation provision adequacy and firm value in Indonesian extractive sector companies.

Figure 3. Proposed Conceptual Framework: Independent Commissioner Characteristics as Moderator of Green Capital Budgeting Quality and Firm Value in the Indonesian Extractive Sector

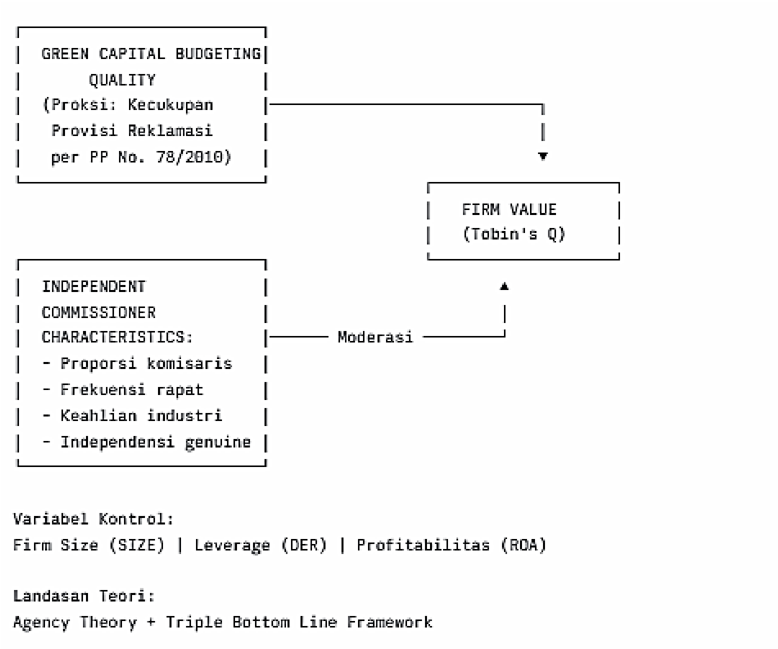

Figure 3 illustrates the proposed conceptual framework of this study. Green capital budgeting quality, proxied by reclamation provision adequacy as mandated by Government Regulation No. 78 of 2010, is positioned as the independent variable whose relationship with firm value measured by Tobin's Q is moderated by independent commissioner characteristics. The moderating variable encompasses four dimensions: the proportion of independent commissioners, board meeting frequency, relevant industry expertise, and genuine independence from controlling shareholders as distinct from formal regulatory compliance with the 30% threshold established by OJK Regulation No. 33/POJK.04/2014 (Otoritas Jasa Keuangan, 2014).

The distinction between formal and genuine independence is critical: Santosa et al. (2022) and Fitriyani et al. (2025) both demonstrated that formal commissioner presence does not consistently produce significant governance effects, while Ramadhan et al. (2022) established that engagement quality measured by meeting frequency is a more reliable predictor of governance effectiveness. The framework is grounded in the integration of agency theory (Ardianto et al., 2021; Risdiawan et al., 2024) and the TBL framework (Li et al., 2026). Three control variables are included: firm size measured by the natural logarithm of total assets, leverage measured by the Debt to Equity Ratio, and profitability measured by Return on Assets, consistent with prior Indonesian governance studies (Santosa et al., 2022; Tanasya & Handayani, 2020; Rasyid et al., 2022).

The proposed sample covers extractive sector companies listed on IDX under IDXENERGY and IDXBASIC for 2020–2024, comprising a population of 203 listed companies 89 under IDXENERGY and 114 under IDXBASIC (Bursa Efek Indonesia, 2024). The conceptual framework presented in Figure 3 is not proposed as a standalone theoretical contribution, but rather as a direct response to identifiable and evidence-based gaps in the existing literature. Each element of the framework was determined by what prior studies have examined, what they found, and what they explicitly recommended as directions for future research. Table 5 maps these gaps systematically.

Table 5. Research Gap Mapping and Future Empirical Research Agenda

No	Research Gap	Evidence Base	Future Research Opportunity
1	No study has tested independent commissioner moderation of green capital budgeting quality → firm value in Indonesian extractive sector	Fitriyani et al. (2025); Risdiawan et al. (2024)-explicit recommendations	Panel data empirical test using reclamation provision as GCB proxy, IDX extractive sector 2020-2024
2	Reclamation provision as a GCB proxy has not been used in any Indonesian governance-investment study	Dwiharto & Kurniasih (2023)-GCB feasibility without governance dimension	Develop and validate reclamation provision adequacy ratio as a measurable GCB quality proxy
3	Board meeting frequency as moderator of GCB-firm value relationship is untested	Ramadhan et al. (2022)-meeting frequency significant; Karsam et al. (2022)-mining sector	Test board engagement characteristics as moderators rather than structural composition
4	The CG-investment relationship in Indonesia may differ from Malaysia and other ASEAN peers	Khan et al. (2023)-significant in Malaysia, not in Indonesia for voluntary green innovation	Test whether mandatory GCB context (reclamation) produces different results from voluntary green innovation
5	Integrated agency theory + TBL framework has not been empirically tested in Indonesian extractive sector	Li et al. (2026); Ardianto et al. (2021); Risdiawan et al. (2024)-used separately	Empirical test of integrated framework using Indonesian extractive sector panel data 2020-2024

The five gaps in Table 5 collectively define an empirical research agenda that is theoretically motivated and practically significant. Gap 1 and Gap 2 constitute the core empirical priority: the first test of independent commissioner moderation of reclamation provision adequacy on firm value in the Indonesian extractive sector, using a proxy that has not previously appeared in the Indonesian governance-investment literature. Gap 3 addresses moderating variable measurement, reflecting the consistent finding that engagement-based governance measures outperform structural composition in predicting governance outcomes (Ramadhan et al., 2022; Karsam et al., 2022). Gap 4 responds to Khan et al. (2023), raising whether mandatory regulatory contexts produce systematically different governance moderation outcomes than voluntary sustainability activities. Gap 5 addresses the theoretical integration proposed in this study a combination that has not been empirically tested in the Indonesian extractive sector despite each framework being individually well-established.

CONCLUSIONS AND SUGGESTION

Conclusions

This study developed a conceptual framework examining the role of independent commissioners in overseeing mandatory green capital budgeting obligations specifically reclamation provisions in Indonesian extractive sector companies, grounded in the integrated application of agency theory and the triple bottom line framework. Three principal conclusions emerge from the systematic review of 29 verified sources.

First, the integration of agency theory and the triple bottom line framework provides a theoretically robust foundation for understanding independent commissioner oversight in the Indonesian extractive sector. Agency theory explains why oversight is necessary: information asymmetry between managers and shareholders creates systematic incentives for underinvestment in mandatory environmental obligations, including reclamation provisions. The triple bottom line framework establishes why this matters for value: investment decisions must simultaneously satisfy economic, environmental, and social criteria, all three of which are legally mandated through Government Regulation No. 78 of 2010, Law No. 3 of 2020, and Indonesia's SNDC commitments (Pemerintah Republik Indonesia, 2010; 2020; 2021). The Rp35 trillion in nationally accumulated reclamation guarantee funds as of September 2025 (Kementerian ESDM, 2025) and Rp140.486 trillion in mineral and coal non-tax state revenues in 2024 (Kementerian ESDM, 2024) illustrate both the financial scale and governance significance of these obligations.

Second, independent commissioners exercise oversight through four mechanisms strategic evaluation of investment proposals, monitoring of investment execution, advisory input on capital allocation, and accountability reporting whose effectiveness depends on governance engagement quality rather than formal structural compliance. The empirical evidence consistently shows that the formal proportion of independent commissioners does not independently predict firm value in Indonesia (Santosa et al., 2022; Fitriyani et al., 2025), while engagement-based measures such as board meeting frequency produce more consistent and significant governance effects (Ramadhan et al., 2022; Karsam et al., 2022). This finding has a direct implication for future empirical research: measurement of independent commissioner effectiveness must incorporate engagement characteristics alongside structural composition variables.

Third, reclamation provision adequacy the ratio of actual to required reclamation guarantee fund deposits under Government Regulation No. 78 of 2010 constitutes a theoretically justified, legally grounded, and empirically novel proxy for green capital budgeting quality in the Indonesian extractive sector. Dwiharto and Kurniasih (2023) established the financial viability of green capital investments in post-mining programs; Sukmadilaga et al. (2023) confirmed that green accounting practices significantly relate to firm value in ASEAN countries; and Mahaputra and Saputra (2024) demonstrated that appropriate capital budgeting decision-making positively influences long-term firm performance. Together, these findings establish reclamation provision adequacy as a value-relevant indicator whose relationship with firm value is theoretically expected to be moderated by independent commissioner oversight quality.

Suggestion

For academic researchers, this study recommends empirical testing of the proposed framework using panel data from 203 extractive sector companies listed on IDX under IDXENERGY and IDXBASIC for 2020-2024 (Bursa Efek Indonesia, 2024), employing moderated regression analysis with reclamation provision adequacy as the independent variable, Tobin's Q as the dependent variable, and independent commissioner characteristics-proportion, meeting frequency, and industry expertise as the moderating variable. Firm size, leverage, and profitability are recommended as control variables (Santosa et al., 2022; Tanasya & Handayani, 2020; Rasyid et al., 2022). Future studies are further encouraged to address the explicit recommendations of Fitriyani et al. (2025) and Risdiawan et al. (2024) by exploring governance factors as moderators in investment-performance relationships and conducting sub-sample analysis of companies experiencing reclamation underinvestment.

For corporate governance practitioners, this study underscores that fulfilling the formal 30% independent commissioner threshold under OJK Regulation No. 33/POJK.04/2014 is necessary but insufficient for effective investment oversight. Extractive sector companies are encouraged to establish formal board-level protocols for reviewing annual reclamation provision adequacy, engaging independent technical expertise where necessary, and ensuring that sustainability reporting accurately reflects underlying environmental restoration obligations (Karsam et al., 2022; Fujianti et al., 2024).

For regulatory policymakers specifically OJK, the Ministry of Energy and Mineral Resources, and the Indonesia Stock Exchange this study highlights the need to strengthen the linkage between corporate governance oversight and reclamation compliance monitoring. Current frameworks treat these as parallel but separate streams, whereas the proposed conceptual framework establishes their causal connection: independent commissioner oversight quality directly affects reclamation provision adequacy, which in turn affects both firm value and the reliability of the national reclamation guarantee fund as an environmental protection mechanism. Requiring extractive sector companies to disclose board-level deliberations on reclamation provision adequacy in their annual governance reports would create a disclosure bridge that currently does not exist, consistent with Indonesia's SNDC commitments and LTS-LCCR 2050 long-term strategy (Pemerintah Republik Indonesia, 2021).

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