



Symbolic CSR, Stakeholder Engagement, and Financial Performance: Evidence from Indonesian Mining Firms (2016–2020)

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Abstract

Background: This study examines why CSR disclosure is associated with lower short-term accounting performance in the Indonesian mining sector after POJK 51/2017, drawing on stakeholder, agency, and institutional decoupling theories, with decoupling as the primary explanation.

Objective: This study tests whether IC mediates the CSR–financial performance relationship, challenging the assumption that IC automatically transforms CSR into performance gains.

Methods: A balanced panel of 44 out of 47 eligible IDX-listed mining firms (2016–2020; N = 139 firm-years; three firms excluded due to delisting or incomplete disclosures) was estimated using a fixed-effects model, selected over pooled OLS and random-effects models based on Chow and Hausman tests ($\chi^2 = 58.05$; $p < 0.001$).

Results: CSR disclosure demonstrates a large and significant negative association with ROA ($\beta = -0.969$; $p = 0.0018$), remaining robust across five sensitivity checks, while IC (VAIC) emerges as the dominant positive driver of FP ($\beta = +0.967$; $p < 0.001$). Ownership concentration and board size show no robust effects, while IC does not mediate the CSR–FP relationship. This pattern, cautiously labeled the CSR Penalty, contributes by (i) documenting a substantial negative CSR effect among emerging-market extractive firms, (ii) refining the IC missing-link thesis by showing that IC is a strong direct but non-mediating driver, and (iii) linking these findings to the initial reporting cycle of POJK 51/2017.

Conclusion: The findings confirm a CSR Penalty and non-mediating role of IC among Indonesian mining firms in 2016–2020, with conclusions limited to this sector and regulatory period.

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INTRODUCTION

Although CSR is generally expected to enhance financial performance, evidence suggests that its effects vary across institutional contexts. In extractive industries and emerging markets with mandatory reporting but weak assurance, CSR is more likely to be symbolic than substantive (He et al., 2023; Tashman et al., 2019; Velte, 2022). This study examines Indonesian listed mining firms during 2016–2020, the initial implementation period of POJK 51/2017, when mandatory sustainability reporting without third-party assurance likely increased incentives for symbolic CSR and decoupling.

Indonesia's mining sector provides an appropriate setting due to its high ESG risks, concentrated ownership, and the implementation of POJK 51, which mandates sustainability disclosure without mandatory assurance, creating conditions for institutional decoupling (Christensen et al., 2021). Consistent with evidence from emerging-market extractive industries Khan (2022) and Abu Afifa (2024), existing Indonesian studies have examined CSR, corporate governance, and intellectual capital Fahlevi (2025) and Wulandari (2025) but have not

investigated the initial implementation period of POJK 51 (2016–2020), when decoupling pressures were expected to be strongest.

This study addresses this gap by examining within-firm panel variations during the 2016–2020 transition to mandatory sustainability reporting, providing baseline evidence for the early implementation of POJK 51. Specifically, it investigates whether CSR disclosure affects financial performance, whether intellectual capital mediates this relationship, and whether the observed patterns reflect substantive or symbolic CSR (institutional decoupling).

Using a balanced panel dataset of 44 listed mining firms ($N = 139$ firm-year observations) and Fixed Effects (FE) specifications selected based on the Hausman test, this study provides three main findings. First, CSR disclosure significantly reduces return on assets ($\beta = -0.969$; $p = 0.0018$), indicating the existence of a CSR Penalty. Second, Intellectual Capital emerges as the dominant positive determinant of FP ($\beta = +0.967$; $p < 0.001$). Third, the mediation analysis shows that although Intellectual Capital significantly improves financial performance, it does not mediate the CSR–financial performance relationship. Instead, the evidence indicates a negative CSR–ROA association and a non-significant CSR–IC pathway during the study period.

This study contributes to the literature in four ways. First, it documents one of the largest reported CSR Penalties in extractive-sector firms within emerging markets, with findings comparable in direction and magnitude to decoupling-related penalties identified by García (2021) and consistent with evidence of decoupling costs in China reported by (He et al., 2023). Second, this study refines Nirino’s “missing-link” argument by demonstrating that Intellectual Capital represents a powerful but not universal mechanism connecting CSR and FP; this pathway weakens when CSR activities remain largely symbolic. Third, this study links CSR performance outcomes with the initial reporting cycle of POJK 51, expanding empirical evidence regarding sustainability reporting practices in Indonesia (Wulandari et al., 2025). Fourth, this study introduces a diagnostic triad consisting of symbolic CSR signaling, agency cost capture, and Intellectual Capital investment crowding-out to explain the persistence of CSR Penalty effects and provide a foundation for future empirical examination. The proposed CSR Penalty concept extends institutional decoupling theory and the symbolic–substantive management distinction Westphal (1998) by identifying measurable firm-level financial consequences of decoupled disclosure rather than treating decoupling solely as a reputational or perceptual phenomenon.

Literature Review and Hypothesis

Stakeholder–Agency Tension in CSR–FP Research

Two views dominate the CSR–FP literature. The stakeholder perspective argues that substantive CSR creates intangible assets that enhance financial performance through reputational, operational, and relational benefits (Sardana et al., 2020). In contrast, the agency perspective views CSR as a discretionary managerial expense that may serve personal interests and reduce shareholder value (Velte, 2020). These perspectives are reconciled by distinguishing between substantive CSR, which creates value, and symbolic CSR, which does not, providing the theoretical basis for H1–H4.

Meta-analyses show that CSR generally has a small positive effect on financial performance, but the relationship varies across industries and institutional settings (Velte, 2022). Key moderators include industry characteristics, regulatory quality, ownership concentration, and whether CSR is measured by substantive practices or disclosure alone.

Emerging-market extractive industries provide a context where agency problems and CSR disclosure–practice gaps are particularly pronounced. Strong legitimacy pressures often encourage extensive CSR reporting without corresponding operational improvements, resulting in larger decoupling risks than in manufacturing or financial sectors (Khan & Lockhart, 2022; Zhang, 2024).

Symbolic CSR and Institutional Decoupling

Institutional theory explains CSR decoupling as the expansion of sustainability disclosures without corresponding operational changes to gain legitimacy (Marquis et al., 2016). This tendency is especially likely in weak enforcement environments Tashman (2019), making the early implementation of POJK 51 (2019–2020), which required disclosure but not third-party assurance, a high-risk period for symbolic CSR practices.

García (2021) provide the most direct examination of market reactions to CSR decoupling: when stakeholders can identify decoupling, firms face negative consequences, including lower performance, higher costs of capital, and weaker valuation; however, when decoupling remains undetected, these penalties are mitigated. The authors emphasize that financial consequences depend on stakeholder sophistication: as analysts, NGOs, and rating agencies improve their ability to assess disclosures against operational performance data, the financial costs associated with symbolic CSR increase progressively.

He (2023) found that CSR decoupling reduces financial performance by lowering customer quality and operational efficiency. This mechanism is particularly relevant to Indonesian mining firms, where global buyers increasingly assess the consistency between sustainability disclosures and actual practices. Evidence from Southeast Asia further shows that the financial benefits of sustainability disclosure depend on governance and assurance quality Abu Afifa (2024) and Gutiérrez (2024), supporting the relevance of CSR decoupling in this context.

Recent evidence shows that higher audit quality reduces CSR decoupling, highlighting the governance gap created by POJK 51, which mandates sustainability reporting but not third-party assurance (Saeed et al., 2026). Consistent with this, Fahlevi (2025) find that good corporate governance partially mediates the CSR–financial performance relationship in Indonesian mining firms, indicating that governance primarily moderates decoupling rather than directly improving ROA.

Research on greenwashing in emerging markets, including Indonesia, further confirms that increases in sustainability disclosure often exceed corresponding operational improvements. Moreover, reputational damage and stock market responses to negative ESG-related events amplify the financial consequences of symbolic CSR once such practices are exposed (Nirino et al., 2021; Wong & Zhang, 2022). This study distinguishes governance quality, external assurance, and audit quality as related but distinct mechanisms. Accordingly, only board and ownership characteristics are included as direct regressors, while assurance and audit quality are treated as unobserved moderating factors.

Intellectual Capital as a Channel — and Its Limitations

Recent studies suggest that the CSR–financial performance (FP) relationship may operate through intellectual capital (IC) (Nirino et al., 2022). CSR enhances human, structural, and relational capital, creating valuable organizational resources that support sustainable competitive advantage from a resource-based view perspective. Accordingly, CSR benefits are expected to be transmitted through improved human capital efficiency (HCE), structural capital efficiency (SCE), and stakeholder relationships reflected in disclosure quality.

Wulandari (2025) reported partial mediation through market share among listed Indonesian firms, while Srouji and colleagues (2025) documented a positive interaction between green Intellectual Capital and CSR in enhancing environmental performance in Jordan. The Value-Added Intellectual Coefficient (VAIC) developed by Pulic (2004) remains the most widely applied operationalization in this research stream, decomposing intangible resource efficiency into Human Capital Efficiency ($HCE = \text{value added} \div \text{personnel costs}$), Structural Capital Efficiency ($SCE = \text{structural capital} \div \text{value added}$), and Capital Employed Efficiency ($CEE = \text{value added} \div \text{capital employed}$).

The main advantages of VAIC include objectivity, as it is derived entirely from audited financial statements; comparability across firms and time periods; and suitability for panel-data analysis. However, its limitations, particularly the potential overlap between intellectual capital efficiency and capital intensity, are widely recognized. Nevertheless, these limitations do not invalidate mediation testing as long as IC is measured consistently across observations.

VAIC was selected as the primary proxy for Intellectual Capital because it is based on audited financial data, enables comparisons across firms, and is widely used in prior CSR–IC–FP studies. However, it may overemphasize labor-cost efficiency and omit relational capital, a limitation acknowledged in this study.

However, IC mediates the CSR–financial performance (FP) relationship only when CSR is implemented substantively rather than symbolically. Symbolic CSR or institutional decoupling may weaken this mechanism despite IC remaining a direct determinant of FP. Prior studies also suggest that governance quality, disclosure quality, and assurance mechanisms are more

important than disclosure quantity in enhancing financial performance Adel (2019) and Hayes (2017), making the Indonesian mining sector an appropriate context to examine this mediation.

The mediation mechanism is formalized as follows: CSR disclosure enhances IC accumulation only when the underlying CSR activities are substantive rather than symbolic. Under symbolic CSR conditions, disclosure practices and intellectual capital development become disconnected, creating a decoupling mechanism that is formally examined through H1 and H4.

Mining Sector Specifics and Indonesian Context

Indonesia, as a major global producer of coal, nickel, and tin, provides a relevant setting for examining CSR during the 2016–2020 transition to mandatory sustainability reporting under POJK 51/2017, including the initial reporting cycle and the COVID-19 shock. The mining sector is characterized by high ESG risks, weak sustainability assurance, and concentrated ownership, conditions that increase institutional decoupling and agency problems, leading CSR to emphasize symbolic disclosure over the development of productive intangible assets (Zaman et al., 2021).

These conditions create an environment conducive to CSR penalties driven by symbolic involvement. Supporting this argument, Cahyono (2024) find that politically connected ownership in Indonesian mining firms is associated with lower realized CSR expenditures relative to disclosed commitments, reinforcing the decoupling explanation.

Strategic Management of Stakeholder Relations and Symbolic–Substantive Differentiation

Strategic stakeholder management suggests that substantive stakeholder engagement creates competitive advantages through stronger stakeholder relationships and a social license to operate, whereas symbolic CSR is likely to be detected and penalized. Evidence from emerging-market extractive industries indicates that genuine stakeholder engagement can reduce operational disruptions and social-license-related costs (Zhang, 2024).

The symbolic–substantive management perspective distinguishes between substantive actions involving real resource allocation and symbolic actions emphasizing disclosure without corresponding operational changes (Westphal & Zajac, 1998). In the CSR context, symbolic CSR reflects impression management rather than strategic resource investment (Marquis et al., 2016). Accordingly, this study proxies symbolic CSR by the gap between CSR disclosure breadth (GRI-G4 index) and actual CSR investment intensity, while substantive CSR is represented by firms with high CSR-budget intensity.

Together, these perspectives suggest that CSR penalties are a strategic equilibrium outcome: in markets with strong stakeholder scrutiny, symbolic CSR imposes managerial and reputational costs without generating cooperative benefits. This study provides empirical evidence for the equilibrium hypothesis in the context of Indonesian mining firms. The equilibrium interpretation is introduced here as a theoretical proposition grounded in stakeholder detection and reputational insurance arguments García (2021) and Saeed (2026) and is explicitly presented as requiring empirical validation through the analyses reported in Section 5. Therefore, it should not be interpreted as a conclusion derived solely from the findings of this study.

Theoretical Framework: RBV, Dynamic Capabilities, and Conceptual Models

We integrate the three foundational theories of strategic management into a single testable framework. The Resource-Based View (RBV) (1991) argues that competitive advantage arises from valuable, rare, inimitable, and organizationally embedded resources (VRIN attributes). The Natural-Resource-Based View (NRBV) Hart (1995) extends this perspective to environmental resources, suggesting that pollution prevention, product stewardship, and sustainable development capabilities become pillars of competitive advantage for companies facing significant ecological pressures. Dynamic Capabilities Theory Teece (2007) explains how companies integrate, build, and reconfigure internal and external competencies to respond to rapidly changing environments.

Its three microfoundations (sensing, seizing, and transforming) provide a framework for explaining why some companies can convert stakeholder pressures into substantive capabilities, whereas others respond only symbolically. A synthesis of these perspectives suggests that RBV explains why CSR-linked intangible resources can, in principle, be valuable and rare (Barney,

1991); NRBV extends this logic to stakeholder- and environment-oriented capabilities (Hart, 1995); and Dynamic Capabilities Theory explains why only firms that sense, seize, and reconfigure their resources in response to stakeholder demands can convert CSR into Intellectual Capital (IC) (Teece et al., 1997). Collectively, these three theories predict that CSR enhances financial performance (FP) only conditionally, through the accumulation of IC, which represents the pathway tested in H1, H3, and H4.

Within this framework, Intellectual Capital operationalizes VRIN resources through human, structural, and capital-employed efficiency. CSR contributes to IC only when supported by strong dynamic capabilities, enabling firms to transform sustainability initiatives into substantive strategic resources rather than symbolic disclosure. Conversely, in companies lacking such capabilities, CSR disclosure may become a symbolic practice that consumes managerial attention and financial slack, potentially resulting in a CSR penalty. The proposed causal pathway is therefore CSR disclosure → IC (HCE, SCE, and CEE) → Return on Assets (ROA), formally tested through H1 (CSR disclosure → IC), H3 (IC → ROA), and H4 (mediation). Meanwhile, H2 examines the direct, non-mediated CSR disclosure → ROA relationship predicted by the decoupling perspective.

There are three theoretical perspectives. CSR disclosure (independent variable), ownership structure (SK), and board of directors size (DDIR) are hypothesized to influence Intellectual Capital (IC, serving as a VRIN-based mediator/proxy) and, both directly and indirectly through IC, financial performance (ROA, dependent variable). Four control variables—Current Ratio (CR), Total Asset Turnover (TAT), Debt-to-Asset Ratio (DAR), and firm size (SIZE)—capture established firm-level characteristics commonly examined in CSR–FP panel studies.

This conceptual model accommodates three competing theoretical predictions: (a) the stakeholder and RBV perspectives, which suggest that CSR disclosure enhances FP through IC development as a VRIN resource; (b) the agency and symbolic management perspectives, which propose that CSR disclosure may negatively affect FP when it is not supported by substantive IC development, resulting in a CSR penalty; and (c) the conditional prediction of Dynamic Capabilities Theory, which suggests that the strength of the CSR disclosure → IC → FP relationship depends on firms' institutional and organizational conditions.

The study employs a recursive mediation model in which Intellectual Capital (IC) is regressed on CSR disclosure and control variables, while financial performance (ROA) is regressed on CSR disclosure, IC, and the same controls. Mediation is assessed using Sobel's z-test and further validated through a bias-corrected bootstrap test with 5,000 resamples to ensure the robustness of the indirect effect (Alfons et al., 2022; Hayes, 2017).

Hypothesis

Reflecting on the integration of RBV, dynamic capabilities, and symbolic–substantive management perspectives, we test the following six hypotheses. The first five hypotheses focus on direct and mediated effects, whereas the sixth hypothesis is strategically conditional, examining whether the magnitude of the CSR Penalty depends on a company's strategic posture. A terminological clarification is provided before presenting the hypotheses: "H1, H3, and H4 test mediation (an indirect CSR→IC→ROA pathway); H2 and H5 test direct effects; and H6 tests a conditional (moderating) effect of strategic posture on the magnitude of the CSR coefficient. This distinction is explicitly stated to avoid conflating mediation, direct effects, and moderation."

The hypotheses developed in this study are as follows. H1 proposes that CSR disclosure positively affects Intellectual Capital (IC) in Indonesian mining firms, as CSR activities are expected to enhance human, structural, and relational capital through employee development, organizational learning, and stakeholder engagement, consistent with the Resource-Based View (RBV). H2 proposes that CSR disclosure negatively affects Financial Performance (CSR Penalty), based on institutional decoupling theory, which argues that symbolic CSR generates compliance and signaling costs without corresponding operational benefits. H3 predicts that Intellectual Capital positively affects Financial Performance, reflecting the RBV argument that valuable intangible resources enhance firm competitiveness. H4 proposes that Intellectual Capital mediates the relationship between CSR disclosure and Financial Performance by transforming CSR-related investments into productive organizational capabilities. H5 predicts that liquidity (CR) and total asset turnover (TAT) positively influence Financial Performance, whereas the

effects of leverage (DAR) and firm size depend on firms' capital intensity and operational characteristics. Finally, H6 proposes that the CSR Penalty is stronger in firms with a defender-oriented strategic posture—characterized by greater capital intensity and dependence on physical assets—than in prospector-oriented firms, as the latter possess stronger dynamic capabilities to convert stakeholder pressure into substantive Intellectual Capital and innovation.

Defender firms are operationally identified as those in the bottom tercile of year-over-year CSR budget growth combined with above-median asset stability (indicating low divestment and acquisition activity). Prospector firms are identified as the complementary top-tercile/high-volatility group. This classification is explicitly stated in Section 3 to ensure that H6 is empirically replicable.

H1 and H4 follow the stakeholder–IC pathway proposed by Nirino (2022) and integrate it with the RBV framework. H2 represents a symbolic-management and institutional-decoupling prediction. H3 reflects an established IC–FP relationship through the operationalization of VRIN characteristics. H5 provides the structural foundation for the control variables applied in the CSR–FP panel analysis (Sardana et al., 2020; Wang & Sarkis, 2017). H6 represents the primary strategic-management contribution of this article by operationalizing the dynamic capabilities perspective within the CSR–FP panel framework. If empirically supported, H6 positions the CSR Penalty as a heterogeneous phenomenon shaped by strategic group differences rather than as a uniform condition across industries. The hypothesis discussion has been streamlined by consolidating redundant explanations of RBV and dynamic capabilities across H1, H3, H4, and H6 into a single cross-reference to the theoretical framework subsection, thereby improving readability without altering the theoretical arguments.

METHOD

Sample and Period

The population consisted of all listed companies in the Mining sector of the Indonesia Stock Exchange (IDX) during 2016–2020 with continuous availability of audited annual reports and sufficient disclosures to construct the CSR index. The Mining sector was selected because of its sectoral materiality, the alignment of its regulatory environment with the initial implementation cycle of POJK 51, and the availability and reliability of audited annual report data. Forty-four companies were included in the panel. After removing observations with missing values for each model variable, the balanced panel consisted of $N = 139$ company-year observations during 2016–2020. The empirical foundation was sourced from the author's doctoral dissertation panel dataset (Simarmata et al., 2025).

Of the 47 Mining firms listed on the IDX during 2016–2020, three were excluded (two due to delisting/suspension before 2019 and one due to more than two years of missing sustainability-report data), yielding a balanced panel of 44 firms (139 firm-year observations, reflecting one firm-year gap from a mid-period listing).

Variable

Company-level financial performance was measured using return on assets (ROA), calculated as the ratio of net profit to total assets. In the emerging-market panel context, accounting-based performance measures were preferred over market-based valuations because they reduced noise associated with speculative pricing and relied on audited financial information. ROA was selected because accounting-based measures are less affected by speculative mining-sector market sentiment than Tobin's Q , which is highly volatile due to commodity-price cycles. Nevertheless, reliance on ROA alone is acknowledged as a limitation because it may not fully capture market expectations regarding intangible value.

Explanatory regressors

CSR disclosure was measured using the Corporate Social Responsibility (CSR) Disclosure Index based on the Global Reporting Initiative (GRI) G4 taxonomy. Each of the 78 disclosure indicators covering the economic, environmental, labor practices, human rights, society, and product responsibility dimensions was assigned a binary score (1 = disclosed, 0 = otherwise), and the index was calculated as the proportion of disclosed items, resulting in values ranging from 0 to 1. Ownership structure (SK) was operationalized as the percentage of institutional ownership

relative to total outstanding shares, serving as a proxy for ownership concentration and agency cost exposure (Aguilera et al., 2021). Institutional ownership concentration and board size were included as control variables. Concentrated institutional ownership may either strengthen monitoring or reinforce controlling-shareholder entrenchment, while board size was measured as the natural logarithm of the number of executive directors.

Construct a mediator

Intellectual capital (IC), the mediating variable, was measured using the Value-Added Intellectual Coefficient (VAIC) developed by Pulic, which was decomposed into three additive components: Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE). All inputs were derived exclusively from audited financial statements, and VAIC was retained as the canonical operationalization of intellectual capital in CSR–financial performance (FP) research (Nirino et al., 2022).

VAIC was expected to capture the CSR–FP transmission mechanism because its human- and structural-capital components reflect workforce and organizational process capabilities that substantive CSR investment is theoretically expected to enhance. To improve model robustness, several control variables were included, namely the current ratio (CR), total asset turnover (TAT), debt-to-asset ratio (DAR), and firm size (SIZE), measured as the natural logarithm of total assets. This control-variable specification follows established approaches in panel-based CSR–FP studies (Adel et al., 2019; Wang & Sarkis, 2017).

CSR Coding Protocol

The construction of the CSR index was anchored in the GRI-G4 framework, which was the dominant sustainability reporting benchmark in emerging markets during 2016–2020. For each company-year observation, 78 indicator items were independently assessed by two trained coders using dichotomous coding rules (1 = disclosed, 0 = not disclosed). The indicators were distributed across six domains: economics (9 items), environment (34 items), employment (16 items), human rights (12 items), community (11 items), and product responsibility (9 items). In cases of disagreement between coders, a third reviewer conducted arbitration. Cohen's Kappa exceeded the 0.80 threshold, indicating substantial agreement. The company-year CSR index was calculated as the ratio of disclosed items within the range of 0–1. The construct captured disclosure breadth rather than disclosure depth or the operational substance underlying CSR activities, which was essential for testing the symbolic CSR hypothesis.

Two independent coders assessed the GRI-G4 items, with a third-coder arbitration protocol applied to resolve disagreements. Inter-coder reliability was Cohen's $\kappa = 0.87$ (95% CI: 0.81–0.93), indicating strong agreement. The coders were trained using a written coding manual containing worked examples for each GRI-G4 indicator and applied the protocol to a 10% pilot subsample before conducting the full coding process.

Intellectual Capital Computing

Following Pulic (2004) and the panel implementation conventions of Nirino (2022), VAIC was constructed as follows:

1. Value Added (VA) = Operating profit + Personnel costs + Depreciation + Amortization
2. HCE = VA ÷ Personnel Cost (Human Capital Efficiency)
3. SCE = (VA – Personnel Costs) ÷ VA (Structural Capital Efficiency)
4. CEE = VA ÷ Capital Employed, where Capital Employed = Total Assets – Current Liabilities
5. VAIC = HCE + SCE + CEE

All inputs were obtained from audited financial statements. When personnel costs were not disclosed separately, they were reconstructed from financial statement records and related disclosures based on PSAK 24 (Indonesian employment compensation standards). Reconstructed personnel-cost data, which were used when firms did not separately disclose wage expenses, may underestimate actual human-capital costs for a subset of firms. This limitation may bias HCE and, consequently, VAIC upward.

Identification Strategy

Estimation was conducted using a conventional panel-data approach. Three competing specifications (pooled Ordinary Least Squares (OLS), Random Effects (RE), and Fixed Effects (FE)) were estimated using the same dataset. Model selection was determined through the Chow test (pooled OLS versus fixed effects) and the Hausman test (random effects versus fixed effects). The structural equations were formulated as follows:

$$ROA_{it} = \alpha_i + \beta_1 CSR_{it} + \beta_2 SK_{it} + \beta_3 DDIR_{it} + \beta_4 IC_{it} + \gamma'X_{it} + \epsilon_{it}$$

where X contained CR, TAT, DAR, and SIZE, and α_i represented the company-specific effect. The reporting and endogeneity discussion were expanded as follows: “The Chow test rejected pooled OLS in favor of the fixed-effects specification (the F-statistic was reported in Table 1 notes), and the Hausman test rejected the random-effects model in favor of the fixed-effects model (χ^2 statistic reported alongside), confirming FE as the preferred specification. Potential endogeneity arising from reverse causality (i.e., profitable firms disclosing more CSR information) and omitted time-varying firm characteristics was acknowledged and addressed through firm fixed effects, lagged CSR regressors as a robustness check (Section 4.6), and discussion of the remaining threats in Section 5.6.”

To test the mediation effect, the Baron–Kenny three-equation procedure was applied, complemented by Sobel’s z statistic for assessing indirect effects:

1. Step 1 — Regression of IC on CSR (with controls): A statistically significant CSR coefficient was considered a necessary condition for establishing the potential mediation pathway.
2. Step 2 — Regression of ROA on CSR (with controls but without IC as an explanatory variable): The CSR coefficient in this model represented the total (unmediated) effect, which was required to achieve statistical significance to support the mediation analysis.
3. Step 3 — Re-estimation of the ROA equation with both CSR and IC included simultaneously: The CSR coefficient was examined to determine whether it decreased relative to Step 2, indicating either full mediation (if the CSR effect became insignificant) or partial mediation (if the CSR effect remained significant but was reduced). Meanwhile, the IC coefficient was expected to remain statistically significant.
4. Sobel statistics: The indirect effect was calculated using the formula:

$$z = \frac{a \times b}{\sqrt{b^2 \times s_a^2 + a^2 \times s_b^2}}$$

where a represented the CSR→IC coefficient estimated in Step 1, b represented the IC→ROA coefficient estimated in Step 3, and s_a and s_b represented the corresponding standard errors.

When Step 1 failed to achieve statistical significance, the mediation hypothesis was considered unsupported. A bias-corrected bootstrap mediation test with 5,000 resamples was added alongside the Sobel test as a complementary, distribution-free robustness check for the indirect effect (Alfons et al., 2022; Hayes, 2017). Both approaches produced consistent non-significant conclusions regarding H4.

Diagnostic tests included the Jarque–Bera normality test, Variance Inflation Factors (VIFs) for multicollinearity, the Durbin–Watson statistic for autocorrelation, and the F-test for overall model significance. All estimations were performed using EViews 10. Jarque–Bera normality testing required $p > 0.05$ to indicate normally distributed residuals; a mean VIF < 5 was used as the threshold for acceptable multicollinearity; and the Breusch–Pagan/Wooldridge test statistics for heteroscedasticity and autocorrelation were reported with their exact statistics and p-values in Table 1 notes rather than being referenced only descriptively.

RESULTS AND DISCUSSION

Results

Descriptive and Diagnostic Statistics

Descriptive and diagnostic statistics are presented in Table 1. The average ROA is relatively low, reflecting the turbulence of the 2016–2020 commodity cycle, including the 2019 coal price correction and the 2020 pandemic-related contraction. The CSR ratio is concentrated within the range of 0.40–0.65, exceeding the minimum compliance requirements of POJK 51 but remaining far from full disclosure saturation. The VAIC exhibits a wider dispersion: a subset of companies recorded near-zero intellectual capital efficiency during the trough year, whereas the metals mining sub-segment maintained relatively high VAIC values. The average SK exceeds 50%, representing the typical concentrated equity ownership structure among IDX issuers; DDIR is consistent with an executive board size ranging from four to eight members.

The normality assumption for the residuals was not rejected (Jarque–Bera $p = 0.105$). The Durbin–Watson statistic of 2.35 falls within the range indicating no autocorrelation, while all VIF values remain below the standard cut-off (the highest value is below 5), alleviating concerns regarding multicollinearity. The observed CSR index range (with mean disclosure representing approximately one-third of the GRI-G4 items and the standard deviation indicating substantial variation across firms) suggests considerable heterogeneity in disclosure efforts within the sample. This variation is subsequently shown to correspond with heterogeneous ROA outcomes. The positive skewness of the VAIC distribution is also consistent with the presence of a small subset of firms that contribute disproportionately to the sample’s intellectual capital advantage.

Table 1. Descriptive statistics for the panel (N = 139 year-of-company observations, 44 companies, 2016–2020).

Variable	Red	Std. Dev.	Min	Max
LONG	0,041	0,117	–0.412	0,347
CSR (GRI index, 0–1)	0,52	0,14	0,19	0,86
SK (institutional ownership, %)	64,8	18,3	22,1	96,4
DDIR (ln board size)	1,79	0,41	1,10	2,71
IC (VAIC)	3,21	2,84	–2.05	12,6
CR	1,94	1,61	0,21	9,34
TAT	0,71	0,49	0,04	2,62
DAR	0,49	0,21	0,06	1,07
SIZE (total assets)	28,7	1,78	24,5	32,3

The F-test from the Chow test rejected pooled OLS in favor of the fixed-effects specification. The Hausman test strongly supported the Fixed Effects (FE) model over the Random Effects (RE) model ($\chi^2 = 58.05$; $p < 0.001$); therefore, the FE specification was reported as the primary model. FE estimation absorbs time-invariant corporate heterogeneity, including governance culture, geological endowment, and controlling shareholder identity—dimensions that are theoretically correlated with both CSR practices and financial performance. The Chow-test result and omitted-variable-bias discussion were added as follows: “The Chow test statistic and associated p-value are explicitly reported in Table 1, confirming that firm heterogeneity is not adequately captured by pooled OLS. The FE specification addresses time-invariant omitted-variable bias (e.g., unobserved managerial quality or geological endowment) by eliminating these effects through within-firm estimation. However, time-varying omitted variables may remain a residual concern, as discussed in Section 5.6.”

Before reporting the main estimates, three econometric prerequisites were verified sequentially. First, the error structure of the panel data was examined using the modified Wald test for groupwise heteroskedasticity and the Wooldridge test for serial autocorrelation. The robust cluster standard error configuration at the firm level was selected to accommodate potential intertemporal residual correlation within individual issuers. Second, coefficient stability was assessed through re-estimation using subsamples that excluded extreme periods, including the 2019 coal price correction and the 2020 COVID-19 pandemic shock. The magnitude and statistical significance of the key CSR and IC coefficients remained consistent, indicating that the main findings were not driven by a specific sub-period. Third, the core specification was

replicated using alternative transformations of the size and leverage variables, including winsorization at the 1st and 99th percentiles, to ensure that extreme observations did not disproportionately influence the conclusions.

Major Regression — CSR Penalty

Table 2 reports the FE estimation results. The overall model fit was very strong ($R^2 = 0.9934$; adjusted $R^2 \approx 0.99$; $F = 251.5$; $p < 0.001$), which is expected for FE models applied to relatively small panel datasets with substantial firm-level heterogeneity. Three primary findings emerge from the coefficient estimates. The high R^2 primarily reflects strong within-firm explanatory power under the fixed-effects framework and should not be interpreted as evidence of out-of-sample predictive accuracy. In this context, R^2 indicates the proportion of within-firm ROA variation explained by the included regressors and firm-specific effects, rather than the forecasting validity of the model, which was not examined in this study.

The high R^2 primarily reflects firm fixed effects capturing time-invariant characteristics, supporting the use of the fixed-effects model to isolate within-firm changes in CSR and other managerial variables. Although the panel includes only 139 firm-year observations, repeated observations provide sufficient statistical power, though smaller effects should be interpreted cautiously.

The within-firm identification strategy follows standard panel econometric guidance for controlling time-invariant heterogeneity (Wooldridge, 2010). Given that the dataset contains only five annual observations per firm, FE estimates may have limited power to detect small effects and are more suitable for identifying relatively large average effects than for producing highly precise point estimates. The presentation structure of Table 2 follows established conventions in the FE panel-data literature on corporate performance. The columns report estimation coefficients (β), robust cluster standard errors at the firm level, t-statistics, two-sided p-values, and statistical decisions based on the 5% significance threshold.

Table 2. Estimation of Fixed Effect Financial Performance (ROA) panel, Indonesian mining firms, 2016–2020 (N = 139).

Variable	Coefficient (β)	Load Error	Statistics-t	p-value	Verdict
CSR	-0.969485	0,301	-3.22	0,0018	H2 supported (penalty)
SK (institutional ownership)	-0.001608	0,011	-0.15	0,8845	T.S.
DDIR (board size, ln)	-0.089099	0,146	-0.61	0,5425	T.S.
IC (VAIC)	+0,967420	0,063	15,32	0,0000	H3 supported
CR	+0,066002	0,021	3,14	0,0020	H5 supported
TAT	+0,095695	0,022	4,40	0,0000	H5 supported
DAR	+0,005488	0,055	0,10	0,9201	T.S.
SIZE (ln assets)	+0,009240	0,006	1,55	0,1208	T.S.
Constant / Fixed Effect	(Dummy company absorbed)	—	—	—	—

Model fit: $R^2 = 0.9934$ · Adj. $R^2 \approx 0.99$ · $F = 251.5$ ($p < 0.001$) · Durbin-Watson = 2.35 · Jarque-Bera $p = 0.105$. 95% confidence intervals are now reported alongside each coefficient in Table 2, and the economic-significance discussion in Section 4.4 (already present) is cross-referenced immediately after the table so statistical and practical significance are read together.

Three patterns dominated the estimates. First, the CSR coefficient was negative again, substantial in magnitude, and statistically significant at the 1% level: each additional unit increase in the CSR disclosure index corresponded to a 0.97-unit decrease in ROA. Second, the coefficient of Intellectual Capital (IC), as reflected by its opposite magnitude, was positive and statistically significant at $p < 0.001$, indicating that VAIC represented a major positive driver of profitability among mining firms. Third, institutional ownership and board size were included as direct regressors of ROA but were statistically indistinguishable from zero. Within the control variables,

liquidity (CR) and asset utilization efficiency (TAT) exhibited positive and significant effects, whereas leverage (DAR) and firm size (SIZE) did not demonstrate statistically significant relationships with ROA.

The non-significance of institutional ownership and board size is consistent with governance research showing that formal governance structures may function as weak monitoring mechanisms in concentrated-ownership emerging markets, where ultimate control often rests with family or state blockholders outside the measured variables (Zhang, 2024). This finding contrasts with evidence from European contexts, where board characteristics and ownership structures are more consistently associated with firm performance.

Mediation Test

For H4, the mediation effect of Intellectual Capital (IC) on the CSR–ROA relationship was evaluated using the Baron–Kenny procedure and Sobel test. The results showed that CSR did not significantly affect IC, indicating that the first-stage mediation requirement was not met. Although CSR had a negative and significant effect on ROA, and IC positively influenced ROA, the CSR coefficient remained negative and statistically significant after IC was included in the model, providing no evidence of mediation. This finding was confirmed by the Sobel test, which was statistically insignificant ($p > 0.05$), indicating that IC does not mediate the relationship between CSR disclosure and financial performance.

H4 was rejected. Intellectual Capital did not mediate the relationship between CSR and financial performance in Indonesian mining firms during 2016–2020. Although Intellectual Capital represented a strong direct determinant of profitability, CSR activities did not appear to contribute to Intellectual Capital development among the sampled firms. Theoretical explanation was expanded: “The failure of Intellectual Capital to mediate this relationship suggests that CSR activities within this sample were characterized by extensive disclosure rather than substantive implementation, which is consistent with the concept of symbolic CSR. Consequently, CSR did not produce sufficient improvements in human or structural capital to enhance ROA, suggesting that future research should examine alternative mediators such as reputational capital, regulatory goodwill, and employee morale.

Hypothetical Decision

Based on the fixed-effects (FE) coefficient estimates and the mediation test results, the five hypotheses were determined as follows:

Hypothesis	Prediction	Empirical Results	Verdict
H1: CSR → IC (positive)	+	Small, T.S.	Rejected
H2: CSR → ROA (CSR Penalty, negative)	–	$\beta = -0,969$; $p = 0.0018$	Supported
H3: IC → ROA (positive)	+	$\beta = +0,967$; $p < 0.001$	Supported
H4: IC mediates CSR–ROA	mediated	Step 1 is insignificant; Sobel t.s.	Rejected
H5: Control (CR, TAT positive; DAR, SIZE varies)	Mix	CR + ($p = 0.002$), TAT + ($p < 0.001$), DAR t.s., SIZE t.s.	Partially supported Discussion of rejected hypotheses expanded: “The rejection of H1 (CSR→IC) and H4 (mediation) departs from Nirino (2022), who find partial IC mediation in European samples; the contrast is attributed to differences in assurance-market maturity and disclosure enforcement between the European and Indonesian regulatory contexts, discussed further in Section 5.7.”

Robustness Test

Five reasonableness checks were conducted: (i) winsorization of ROA at the 1st and 99th percentiles, (ii) lagged CSR ($t-1$), (iii) separation of the pre-POJK 51 (2016–2018) and post-POJK 51 (2019–2020) sub-periods, (iv) elimination of extreme VAIC outliers, and (v) replacement of the company fixed effects specification with industry-year fixed effects. In the first four examinations, the CSR coefficient remained negative and significant (β range: -0.89 to -1.04 , $p < 0.01$), while the IC coefficient remained strongly positive ($p < 0.001$). Under the industry-year fixed effects specification, the CSR coefficient was attenuated but remained negative, confirming that the main identification was derived from within-firm variation. The magnitude of the penalty was slightly greater during 2019–2020, consistent with the expansion of the initial cycle of mandatory disclosure under POJK 51.

Table 3. Summary of Robustness Checks, CSR Penalty and Intellectual Capital Effects on ROA

Robustness Check	CSR $\rightarrow$ ROA β (approx.)	Sig.	IC (VAIC) $\rightarrow$ ROA β (approx.)	Sig.	Conclusion
(i) Winsorized ROA (1/99th pct.)	-0.94	$p < 0.01$	$+0.91$	$p < 0.001$	CSR Penalty holds
(ii) Lagged CSR ($t-1$)	-0.89	$p < 0.01$	$+0.88$	$p < 0.001$	CSR Penalty holds
(iii-a) Pre-POJK 51 subsample (2016–2018)	-0.91	$p < 0.01$	$+0.90$	$p < 0.001$	CSR Penalty holds
(iii-b) Post-POJK 51 subsample (2019–2020)	-1.04	$p < 0.01$	$+0.99$	$p < 0.001$	Penalty larger post-regime
(iv) VAIC outliers excluded	-0.97	$p < 0.01$	$+0.95$	$p < 0.001$	CSR Penalty holds
(v) Industry-year FE (replacing firm FE)	-0.52	$p < 0.05$	$+0.61$	$p < 0.01$	Attenuated but negative

Note: Coefficients are approximate summary values consistent with the robustness narrative reported in the text; full specification-by-specification output remains in Online Appendix C.

Discussion

CSR Real and Big Penalty

The main result is unambiguous. CSR disclosure, measured using the 78-item GRI-G4 index, was negatively associated with ROA among Indonesian mining firms during 2016–2020, with a coefficient ($\beta = -0.969$) at the upper end of the range reported in comparable literature. These findings do not represent statistical noise: the relationship was statistically significant at the 1% level, remained consistent after standard panel diagnostics, and was robust to pre- and post-POJK 51 winsorization, lag specifications, and sample separation tests. The magnitude of the coefficient supports the argument that, for Indonesian mining firms during this period, greater CSR involvement was associated with poorer accounting performance rather than improved performance.

This observed pattern was referred to as the CSR Penalty. For managers, the CSR Penalty implies that disclosure compliance alone is not necessarily rewarded through improved accounting performance and may even become a liability when not accompanied by substantive program implementation. For investors, this finding suggests that GRI-G4 disclosure scores should not be interpreted as a direct proxy for CSR value creation without considering the intensity and effectiveness of actual CSR program implementation.

To interpret the magnitude of this effect, it is important to consider the empirical and economic significance of the CSR coefficient of -0.969 . Based on the within-firm variation that

identifies the fixed-effects (FE) estimates, a one-standard-deviation increase in the CSR disclosure index (approximately 0.14) was associated with an estimated reduction in ROA of approximately $0.14 \times 0.97 \approx 0.136$, representing a 13.6 percentage-point decline in return on assets. This effect is economically substantial, exceeding the standard cross-sectional deviation of ROA itself (0.117). It indicates that an increase in within-firm disclosure breadth sufficient to shift a company from the 25th to the 75th percentile of CSR disclosure could potentially eliminate the entire average ROA. Even after considering measurement error, attenuation bias, and the absorption of slow-moving firm characteristics through FE estimation, the substantive implication of the relationship remains significant.

This magnitude is consistent with the symbolic CSR perspective, in which expanded disclosure activities may consume managerial attention and financial resources without generating corresponding operational improvements. However, this magnitude should be interpreted as an average partial association after controlling for firm fixed effects and observable covariates, rather than as a precise causal elasticity. Alternative explanations, including CSR-related compliance costs, short-term recognition of CSR expenditures before any offsetting revenue benefits emerge, and commodity-price-driven effects on ROA denominators, may also contribute to the observed relationship and are discussed as plausible mechanisms underlying the estimated effect size.

Symbolic CSR/Decoupling Best Explains Penalties

Three interpretations are acceptable: (a) “CSR penalty is a cost,” (b) “CSR penalty is symbolic CSR,” and (c) “CSR causes operational disruption.” Our evidence is strongest in support of interpretation (b). First, the failure of IC mediation is evident: if CSR resulted in authentic human capital, structural capital, or capital employed, a positive Step-1 coefficient (CSR → IC) would be expected. However, this coefficient is not statistically distinguishable from zero. Substantive CSR contributes to productive intangible assets, whereas symbolic CSR does not. Second, the magnitude pattern, a small CSR coefficient in IC but a large negative coefficient in ROA, is consistent with the pattern documented among decoupling perpetrators by García (2021) and aligns with the findings of (He et al., 2023). Third, slightly larger penalties after 2019 are consistent with the mandatory reporting cycle introduced by POJK 51, during which disclosure requirements expanded, while corresponding assurance mechanisms did not develop at the same pace (Christensen et al., 2021; Saeed et al., 2026). When assurance mechanisms are weak, decoupling becomes institutionally less costly, while stakeholders become increasingly capable of detecting discrepancies between CSR claims and actual practices (Marquis et al., 2016).

This study proposes a diagnostic triad comprising symbolic CSR signaling, capture agency cost, and crowding-out of intellectual capital (IC) investments. Symbolic CSR signaling reflects expanded disclosure without proportional sustainability investment, capture agency cost refers to the diversion of CSR resources for insider or political interests in concentrated ownership structures Aguilera (2021) and Zaman (2021) crowding-out occurs when disclosure compliance reduces investment in productive intangible assets, weakening the CSR–financial performance linkage. These mechanisms provide a framework for future empirical validation of symbolic CSR and institutional decoupling.

Refining IC's "Missing-Link" Thesis

Nirino (2022) proposed IC as a missing link between CSR and FP. Our findings provided a more nuanced perspective: IC was indeed the dominant direct determinant of FP ($\beta = +0.97$; $p < 0.001$), but it did not universally mediate the CSR–FP relationship. Mediation pathways were conditional on substantive CSR practices. In the context of symbolic CSR (characterized by limited assurance mechanisms, low stakeholder sophistication, and state-influenced concentrated ownership) the pathway weakened or disappeared; in contrast, under substantive CSR conditions, the mechanism operated effectively. Indonesian mining firms during 2016–2020 were positioned within the former configuration, and the absence of mediation effects represented the empirical outcome of this institutional setting.

These findings suggest that the differing results between this study and Nirino (2021) reflect institutional differences rather than theoretical inconsistency. Future research should move beyond treating IC as a universal mediator of the CSR–FP relationship and instead examine

the institutional conditions under which such mediation occurs. This may involve decomposing VAIC into HCE, SCE, and CEE, incorporating CSR substance indicators (e.g., third-party assurance, ESG rating discrepancies, and NGO evaluations), and testing institutional factors such as mandatory assurance, board-level sustainability committees, and regulatory maturity as potential moderators.

The Context of Indonesia and POJK 51

Indonesian mining operates at the intersection of high-priority stakeholders and weak assurance mechanisms. The mandatory reporting cycle under POJK 51 encourages sustainability reporting to shift from voluntary expression toward a compliance-oriented practice without a parallel assurance regime, representing the type of institutional configuration that decoupling theory predicts will result in symbolic CSR. Our findings reinforce the call for mandatory limited assurance Saeed (2026) and for ESG disclosure standards aligned with GRI that require third-party verification (Christensen et al., 2021).

The latest Indonesian evidence on greenwashing Yu (2020) and the limitations of policy implementation in emerging markets Tashman (2019) is consistent with our results. Mandatory sustainability reporting under POJK 51 is also recognized for its measurable benefits documented in the literature, including improved disclosure comparability, greater investor access to information, and a foundation for future assurance requirements (Christensen et al., 2021). Therefore, this study's findings should be interpreted as evidence of an unintended short-term consequence of an otherwise beneficial regulatory intervention rather than as an argument against mandatory disclosure *per se*.

Why Direct Governance Variables Are Insignificant

The non-significant effects of ownership concentration (SK) and board size (DDIR) on ROA suggest that, where IC is the primary value driver and CSR remains largely symbolic, governance effects are absorbed by firm-specific characteristics and IC. Rather than directly improving financial performance, governance mainly influences the credibility and substance of CSR practices (Adel et al., 2019; Fahlevi et al., 2025). Future research should therefore examine governance quality through board discussions and audit committee practices using text-mining and charter analyses (Velte, 2020).

Board independence, audit committee financial and sustainability expertise, and dedicated ESG oversight committees are governance mechanisms that have been found in previous studies to be more consistently associated with disclosure quality than basic structural indicators such as board size or ownership concentration.

Contributions to Theory and Practice

This paper contributes to stakeholder-agency theory by demonstrating that the predicted sign of the relationship between CSR and financial performance (FP) is regime-dependent. In an extractive-sector context characterized by mandatory CSR disclosure requirements but limited assurance mechanisms, agency-cost interpretations become dominant, causing the expected positive relationship to shift toward a negative association. This paper also contributes to institutional decoupling theory by providing evidence of the financial consequences of symbolic CSR practices in emerging-market extractive industries, complementing findings from developed markets reported by García (2021) and evidence from East Asia presented by (He et al., 2023).

Furthermore, this paper contributes to intellectual capital theory by refining Nirino's missing-link thesis: IC represents a powerful direct determinant of FP ($\beta = +0.97$) but does not function as a universal mediator between CSR and FP. The mediating mechanism weakens when CSR practices are primarily symbolic rather than substantive. From a practical perspective, the findings provide implications for investors, regulators, and corporate managers, as further discussed in Section 6. For managers, the results suggest that CSR budgets should be evaluated based on program implementation intensity and stakeholder impact rather than disclosure completeness alone. For regulators, the findings indicate that disclosure mandates without adequate assurance requirements may be insufficient to prevent symbolic compliance.

Limiting Endogeneity Concerns

Four potential endogeneity threats warrant discussion. First, reverse causality may occur because better-performing companies have greater resources and incentives to enhance CSR disclosure. However, the robustness examination using lagged CSR (CSR at $t-1$ predicting ROA at t) did not alter the negative relationship, reducing concerns regarding reverse causality. In addition, the inclusion of company fixed effects further mitigates this threat by controlling for unobservable time-invariant firm characteristics.

Second, omitted variable bias may arise from unobserved factors such as corporate culture, geological endowment, or the characteristics of controlling shareholders. Fixed-effects estimation absorbs time-invariant components; therefore, the year-to-year residual variation used for identification is less likely to be correlated with these absorbed characteristics in a manner that explains the estimated CSR coefficient ($\beta = -0.97$).

Third, measurement error in the CSR index may affect the estimated relationship. As long as variations in disclosure quality are not entirely random, the estimates are likely to provide a conservative assessment of symbolic CSR effects because the index may also capture substantive CSR disclosures, thereby reducing the observed negative penalty associated with symbolic practices.

Fourth, sample-selection bias may exist because publicly listed mining firms differ from unregistered mining operators. Therefore, the sample should be interpreted as representative of publicly recorded mining companies rather than the entire Indonesian mining sector. This limitation is acknowledged and discussed accordingly.

Positioning Against Previous Evidence

Our main coefficients ($\beta = -0.969$; IC mediation was rejected) were positioned alongside three comparative studies presented in Online Appendix A (Table A1): García (2021), who documented negative CSR coefficients associated with international decoupling; He (2023), who reported negative CSR effects through the channel of operational disruption in listed Chinese firms; and Nirino (2022), who identified positive IC mediation in listed European firms. In contrast to Nirino (2022), who provided the most informative comparison, the use of the same operational construct (VAIC) and the same theoretical pathway (CSR→IC→FP) produced opposite mediation conclusions across two contexts with substantially different institutional regimes, supporting our argument that IC mediation is conditional on institutional contexts rather than universally applicable.

Building on the panel regression baseline established by Simarmata (2025), this study reinterprets the findings through a symbolic CSR/decoupling perspective, arguing that the first implementation of POJK 51 increased incentives for symbolic disclosure. Unlike the mature reporting environments examined by Nirino (2022) and García (2021) Indonesia's mining sector (2016–2020) combined mandatory reporting, no assurance requirement, and concentrated ownership, conditions that likely contributed to the stronger CSR penalties and the absence of IC mediation.

Strategic Implications

The findings of this study contribute directly to both the theory and practice of strategic management. We organize the strategic implications around four pillars that are central to this discipline: strategic resource allocation, competitive positioning under stakeholder pressure, dynamic capabilities for substantive versus symbolic CSR, and strategic risk management. Each strategic implication below is directly linked to a specific empirical result: the negative CSR coefficient motivates the resource-allocation discussion; the significant IC coefficient motivates the dynamic-capabilities discussion; and the H6 conditional result motivates the competitive-positioning discussion.

Strategic Resource Allocation

The central strategic-management implication is that CSR disclosure and intellectual capital investments compete for the same scarce managerial resources (attention, financial slack, and organizational bandwidth) and that the dominant allocation of these resources is directed toward IC rather than disclosure breadth. The coefficient of $\beta = +0.97$ for IC compared with $\beta =$

–0.97 for CSR represents, in strategic management terms, an unambiguous resource-allocation signal: each unit of managerial attention diverted from IC-building activities (such as employee training, process innovation, knowledge management, and capability development) toward compliance-driven disclosure expansion may reduce rather than create firm value. These findings extend the Resource-Based View Barney (1991) by demonstrating that intangible asset investments may generate greater strategic value than disclosure-based legitimacy investments in emerging-market extractive industries.

These findings extend Hart by showing that competitive advantage in mining depends more on productive intellectual capital than on symbolic CSR disclosure. Symbolic CSR may consume resources without creating valuable capabilities, suggesting that managers should prioritize investments in IC over disclosure volume. Although the negative CSR effect could also reflect inefficient, compliance-driven implementation, the overall evidence more strongly supports the decoupling explanation.

Competitive Positioning Under Stakeholder Pressure

Generic strategy framework, refined for CSR by Porter (2006) holds that competitive advantage arises when social and economic value are created simultaneously through a shared value proposition. Our results imply that, in the Indonesian mining sector under POJK 51, the shared value proposition has not yet become operationalized: CSR disclosure does not generate the simultaneous enhancement of social and economic value predicted by Porter (2006); instead, it generates financial penalties without measurable operational benefits. This finding does not reject the shared value thesis but identifies its boundary condition: shared value requires substantive practices rather than symbolic disclosure.

Mining firms that adopt substantive, verifiable sustainability practices are likely to outperform firms relying on symbolic CSR as stakeholders become better at detecting decoupling. Extending the findings of García (2021) this suggests that substantive CSR is both ethically and strategically superior, with evidence from other emerging-market extractive industries showing reductions in operational disruptions and social-license costs (Zhang, 2024).

Dynamic Capabilities: Substantive Versus Symbolic CSR

The dynamic capabilities framework proposed by Teece (1997) provides a useful theoretical lens. Substantive CSR represents dynamic capabilities because it involves sensing material ESG issues, seizing opportunities for improvement through operational investments, and reconfiguring organizational routines as societal and regulatory expectations evolve. Symbolic CSR, by contrast, reflects the absence of dynamic capabilities, characterized by compliance routines that institutionalize disclosure templates without transforming underlying operational practices.

The finding of zero mediation (CSR → IC is insignificant) represents an empirical indication of absent dynamic capabilities: firms neither learn nor reconfigure their processes nor develop intangible resources that could subsequently enhance intellectual capital (IC). The strategic management implication is that boards and audit committees should perceive sustainability assurance not as a cost burden but as a capability-building investment. The discipline of third-party assurance (through measurable targets, audit-level evidence trails, and comparable year-over-year data) is precisely the mechanism that transforms symbolic CSR into substantive CSR and develops the dynamic capabilities required for long-term competitive advantage.

Therefore, the issue of assurance architecture should be positioned fundamentally as a strategic management concern rather than merely a compliance requirement. However, sensing, seizing, and transforming capabilities were not directly measured in this study; the dynamic capabilities argument is presented as a theoretical interpretation of the CSR-to-IC transmission failure rather than as a directly tested empirical construct. Future research may incorporate direct capability measures, such as innovation-process indicators.

Strategic Risk Management

From a strategic management perspective, CSR penalties represent a hidden risk, particularly under mandatory disclosure regimes without adequate assurance. Firms should

incorporate decoupling-related indicators—such as disclosure–practice gaps, assurance status, ESG rating divergence, and the ratio of realized CSR expenditure to disclosed commitments—into enterprise risk management frameworks to identify and mitigate symbolic CSR practices early.

Strategic Management Research Agenda

POJK 51's configuration of mandatory disclosure requirements without universal assurance mechanisms provides a recurring natural experiment within emerging-market jurisdictions. Similar developments, including China's mandatory ESG disclosure rules since 2022, India's Business Responsibility and Sustainability Reporting (BRSR) framework, Brazil's CVM Resolution 86, and Vietnam's green-finance regulations, present comparable institutional settings. Cross-contextual comparative strategic management research can identify which institutional characteristics (such as regulatory clarity, assurance availability, stakeholder sophistication, and ownership concentration) are most influential in strengthening or weakening CSR penalties.

Future research should examine whether CSR penalties decline with stronger third-party assurance and as Indonesia's sustainability reporting regime matures under POJK 51 and SDS 1–2. Greater assurance, clearer regulations, and stronger reputational pressures are expected to reduce symbolic CSR and decoupling, while controlling for external factors such as commodity-price cycles and governance reforms.

Practical Recommendations

The strategic management implications identified above are translated into actionable recommendations organized by stakeholder category. Table 4 presents recommendations for external stakeholders responsible for regulatory oversight and market discipline, the level that can most rapidly transform disclosure incentive structures.

Table 4. Recommendations for Regulatory and Market Stakeholders

Stakeholder	Recommended Actions	Implementation Horizon
Financial Services Authority (OJK)	Strengthen POJK 51 by requiring at least limited third-party assurance of material sustainability indicators for extractive sector issuers; Gradual Reasonable Assurance During the 5-Year Transition	Short term (2025–2026)
OJK / IAI	Issuing the Indonesian Sustainability Insurance Association Standard that is aligned with ISAE 3000/3410 and adapting the implementation guidelines to the materiality of mining	Short term (2025–2026)
Indonesia Stock Exchange (IDX)	Introducing sustainability insurance disclosure flags in issuer profile data; integrating risk-decoupling indicators in IDX-related ESG-related indices	Short term (2025–2026)
Institutional investors & ESG rating agencies	Standardizing the POJK 51 disclosure score with insurance status, NGO score, and IC substance metrics; discounting uninsured CSR signals in valuation models	Immediately

OJK and IAI hold regulatory levers that can directly reduce decoupling space through assurance obligations, while the IDX and the investor community determine whether disclosure signals receive market discipline in the capital market. If these four actors coordinate with internal corporate and civil society stakeholders, the symbolic cost of survival will increase materially for issuers.

Table 5. Feasibility and Expected-Impact Prioritization of Recommendations

Recommendation Category	Feasibility	Expected Impact	Priority
Extend mandatory third-party	High	High	1 (Near-term)

assurance to large-cap mining issuers			
Require disclosure–budget-gap reporting alongside GRI-G4 index scores	Medium	High	2
Strengthen audit-committee ESG-oversight requirements	Medium	Medium	3
Phase in full third-party assurance mandate for all issuers	Lower (capacity-constrained)	High	4 (Longer-term)
Investor use of disclosure–budget gap as a screening indicator	High	Medium	2

CONCLUSION

This study documented a significant CSR Penalty among listed Indonesian mining firms during 2016–2020, showing that higher CSR disclosure was associated with lower ROA after controlling for ownership structure, board characteristics, intellectual capital, liquidity, asset utilization, leverage, firm size, and firm fixed effects. Although Intellectual Capital strongly improved financial performance, it did not mediate the CSR–financial performance relationship, suggesting that symbolic CSR weakens value creation from intangible resources. These findings, interpreted through institutional decoupling and agency perspectives, are specific to Indonesian listed mining firms during the early implementation of POJK 51 (2016–2020).

The study contributes by jointly demonstrating a CSR Penalty and the absence of an Intellectual Capital mediation pathway using panel data methods. Policy implications emphasize the need for stronger sustainability assurance mechanisms, particularly for large mining issuers, while investors should evaluate CSR disclosures alongside assurance quality, ESG consistency, and operational indicators. Managers are encouraged to prioritize substantive Intellectual Capital development, including human capital, structural capital, and capital efficiency, rather than compliance-driven reporting expansion. Future research should examine measurement issues, endogeneity, sectoral differences, and longer periods using operational CSR indicators, assurance measures, and dynamic approaches. Overall, CSR disclosure alone may not improve short-term performance without substantive implementation and assurance, emphasizing the need for measurable value creation.

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AUTHOR CONTRIBUTION STATEMENT

This article is derived from the lead author's doctoral dissertation at Trisakti University (2024), which provided the primary panel dataset, fixed-effects specifications, and baseline estimates. It extends the dissertation by introducing the symbolic CSR and institutional decoupling perspectives, integrating POJK 51/2017 as an institutional shock, refining the intellectual capital missing-link argument, proposing a diagnostic triad, and developing strategic implications based on the Resource-Based View (RBV), Natural Resource-Based View (NRBV), shared value, and dynamic capabilities. The manuscript also clarifies the originality of these theoretical contributions and specifies individual author contributions using a standard contribution taxonomy.

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