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Assessing VAT Collection System Impact on Indonesian Taxpayer Compliance

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ABSTRACT

Purpose: This study aims to analyze the effectiveness of digital tax systems, particularly e-filing and e-billing, and the role of taxpayers' intrinsic awareness in enhancing voluntary compliance and reporting accuracy.
Methodology: A descriptive qualitative approach was employed, relying on a comprehensive literature review of empirical studies and recent academic publications from 2021–2026. This study synthesizes the findings on the relationship between digital tax technology adoption and taxpayer literacy.
Results: The analysis indicates that the simultaneous implementation of a modernized tax infrastructure and high taxpayer awareness positively and significantly improves tax reporting compliance. Digital platforms reduce procedural obstacles, long queues, and bureaucratic complexity, whereas tax literacy reinforces the foundation for voluntary compliance. The findings suggest that neither technology alone nor taxpayer knowledge in isolation is sufficient to achieve optimal compliance.
Conclusion: Achieving effective tax revenue targets requires a balanced approach that integrates digital infrastructure and continuous taxpayer education. Policies and programs should simultaneously enhance system accessibility and public understanding to cultivate a robust tax compliance culture.
Limitations: This study relies on secondary data from the literature and may not capture real-time behavioral nuances or regional variations in taxpayer engagement.
Contributions: This research provides insights for policymakers and tax authorities on designing integrated digital and educational strategies to improve compliance and serves as a reference for future empirical investigations on tax administration effectiveness.

Keywords: *Digital Tax, E-Filing, Tax Compliance, Tax Literacy, Taxpayers*

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1. Introduction

Taxes are the primary fiscal instrument supporting the continuity of national development financing in Indonesia. Within the structure of the State Revenue and Expenditure Budget (APBN), revenues from the taxation sector consistently constitute the largest contributor, determining the country's economic independence. However, revenue target achievement fluctuates frequently, with suboptimal taxpayer compliance being one of the major underlying causes. Noncompliance, whether intentional or resulting from procedural ignorance, remains a continuous challenge for Indonesia's tax authorities.

In response to this dynamic, the government, through the Directorate General of Taxes (DGT), has continuously pursued bureaucratic reforms focused on digitalizing services. Digital transformation through electronic administrative systems (such as e-registration, e-billing, and e-filing) aims to simplify complex regulations and reduce compliance costs often cited by taxpayers. The implementation of technology is expected to foster a more transparent and efficient tax system. However, the provision of advanced technology alone cannot achieve maximum impact without being accompanied by taxpayers' understanding and literacy. Indonesia's self-assessment system entrusts taxpayers with the full responsibility of calculating, paying, and reporting their taxes independently. Therefore, the effectiveness of modernization in improving taxpayer compliance heavily depends on the extent to which the public is educated and understands its obligations. Based on this reality, this study aims to examine the significance of the impact of e-filing systems in synergy with taxpayers' understanding of enhancing compliance.

As profit-seeking entities, companies continually seek methods to achieve effective and efficient outcomes to maximize their profits. Company performance can be assessed in various ways, one of which is by evaluating financial performance. Financial performance reflects how a company conducts its business operations and the results it achieves. Business success is measured by the benefits realized by the organization, aligning with the view that a company's ability to generate profit is a key factor in evaluating its financial performance (Siregar, Syahyunan, & Miraza, 2022). Consequently, a company's financial performance can be assessed through profitability. One sector with strong profit prospects and the highest contribution to state revenue is coal mining, due to its significant role in Indonesia's economy.

This sector not only contributes substantially to state revenue through exports and taxes, owing to its high profitability, but also plays a role in creating employment opportunities (Gudio, 2025). CNBC Indonesia compiled a summary of coal company profits, illustrating market dynamics. The sharp decline in coal company profits is unsurprising, as coal prices significantly decreased throughout the year. According to Refinitiv data, on Thursday, July 31, 2025, coal closed at USD 117.4 per ton, with a slight daily increase of 0.27%. Unfortunately, since the beginning of the year, this fossil fuel price has remained in the negative territory, dropping by more than 8%. Over the past three years, coal prices have also declined annually (Endri, Utama, Effendi, Santoso, & Bahiramsyah, 2021).

The worst decline occurred in 2023, when prices plummeted by over 60%, followed by an almost 15% decrease in 2024. However, this two-year decline can be considered normalization, as 2022 experienced an anomaly with coal prices surging above USD 400 per tonne. In 2024, PT Bumi Resources Tbk (BUMI), a coal mining company affiliated with Bakrie and Salim Groups, reported a significant decline in performance. According to financial statements submitted to the Indonesia Stock Exchange (IDX) on Monday, April 1, 2024, the company recorded a net profit of only USD 10.92 million for the full year of 2023, a 97.92% drop compared to the previous year's profit of USD 525.27 million.

The decline in company profits also affects financial performance, as it is measured by corporate profits. Consequently, a focus on profitability often leads companies to neglect the potential negative environmental impacts of their production processes (Pramudianti, 2023). Environmental damage caused by mining operations is not an isolated incident; it occurs frequently. Operational activities are heavily focused on increasing profits and allocating resources to create new investment opportunities with higher returns than before. However, many companies overlook the implementation of proper environmental management practices, which harms their reputation, results in poor performance, and ultimately affects their financial performance.

2. Literature Review and Hypothesis/es Development

2.1 Stakeholder Theory

Stakeholder Theory was first introduced by Freeman and McVea in 1984. It refers to individuals or groups who have the potential to affect or be affected by the achievement of certain objectives, as defined by Deswanto and Siregar (2018). This theory posits that a company should not solely focus on internal interests but must also provide value to all stakeholders who are interested or involved in the company. The community itself is also a stakeholder; therefore, companies have an obligation to generate value for society. One way to achieve this is by taking responsibility for the surrounding environment through Corporate Social Responsibility (CSR). When a company engages in CSR activities, the community benefits directly from it. Consequently, both the public and investors trust the company because it maintains its image and reputation. Companies that uphold their reputations are more likely to survive, and investors are attracted to firms that are expected to have long-term sustainability. Maintaining good relations with the community, such as through CSR initiatives and effective environmental cost management, is a key approach to achieving long-term sustainability (Ardiansyah, 2024).

Stakeholders encompass various parties, including shareholders, investors, employees, and suppliers. The role of stakeholder theory in this study is to facilitate companies in strengthening relationships with external parties and developing competitive advantages, enabling firms to adapt positively and effectively to their financial performance. Companies with high profitability reflect successful management. According to stakeholder theory, high profitability is positively correlated with stakeholder satisfaction because the company is well managed. Corporate Social Responsibility (CSR) is a key mechanism for companies to meet stakeholder expectations. For instance, coal mining companies that proactively implement land rehabilitation, waste management, or community development programs enhance public trust and support long-term reputation. A strong reputation attracts investors, minimizes social conflicts, and provides operational legitimacy in the eyes of the regulators. Furthermore, stakeholder theory highlights the symbiotic relationship between stakeholder satisfaction and financial performance (Licandro, Burguete, Ortigueira-Sánchez, & Correa, 2024).

Companies that fulfill stakeholder expectations face reduced social risks, increased community loyalty, and greater investor confidence. This study assumes that CSR and environmental cost management strengthen stakeholder relationships and positively influence financial performance, particularly in the mining industry, where social and environmental pressures are high. Moreover, managing stakeholder relationships can serve as a competitive differentiation strategy. Mining companies that demonstrate responsiveness to the community and environment gain an advantage over their competitors (Fraser, 2021). Given this sector's high exposure to reputational risk, commodity price fluctuations, and strict regulations, stakeholder theory justifies investment in CSR and environmental cost management as mechanisms that enhance financial performance and ensure long-term sustainability.

2.2 Legitimacy Theory

Legitimacy theory posits that companies must operate in accordance with societal values and norms to gain recognition or legitimacy from their external environment (Crossley, Elmagrhi, & Ntim, 2021; Gulluscio, 2023). This legitimacy serves as a collective judgment that a company's actions are socially acceptable, making it a crucial element in ensuring sustainability (Deswanto & Siregar, 2018). Legitimacy theory provides a theoretical foundation for understanding a company's financial performance. When a firm demonstrates concern for social issues, such as labor rights, community empowerment, and equity, and implements sound governance principles, including transparency and accountability, it is perceived as a socially responsible entity.

A positive corporate image can foster investor support, enhance customer loyalty, and strengthen relationships with regulators, ultimately improving the financial performance. Legitimacy theory suggests that financial success does not depend solely on internal efficiency but is also heavily influenced by the extent to which a company secures social legitimacy through consistent and credible CSR practices and environmental expenditures. Disclosure and implementation of CSR, particularly socially and environmentally recognized aspects, can strengthen corporate reputation among stakeholders, reduce social risks such as consumer boycotts or regulatory pressure, and provide greater opportunities to secure resources, including capital and market access (Wahyuni & Ahdim, 2025). Legitimacy theory argues that companies must align their operations with societal values and norms to obtain legitimacy. In the coal mining sector, this is particularly critical because mining activities often have significant environmental impacts and provoke public opposition.

Transparent CSR implementation, environmental cost disclosure, and regulatory compliance are ways in which companies can maintain legitimacy (Caputo, Pizzi, Ligorio, & Leopizzi, 2021). For instance, companies that report land rehabilitation costs or waste management efforts not only comply with regulations but also demonstrate their commitment to sustainability. This reinforces public and governmental trust, facilitates permitting, and attracts investments. Legitimacy theory explains that social perception directly affects financial performance: companies recognized as socially responsible gain investor support, increase customer loyalty, and strengthen regulatory relationships, all of which contribute to financial success (Glaveli, 2021).

In this study, CSR disclosure and environmental costs are viewed as mechanisms for securing social legitimacy while supporting financial performance by mitigating social risk and enhancing access to resources. Moreover, social legitimacy can serve as a strategic lever. By obtaining legitimacy, companies reduce resistance to new projects, minimize litigation risks, and ensure stakeholder cooperation. This theoretical lens helps us understand how CSR and environmental cost management not only meet societal expectations but also indirectly enhance financial performance through risk mitigation and strengthened stakeholder trust.

2.3 Modernization of the Tax Administration System

The modernization of the tax administration system refers to the improvement of governance and tax infrastructure through the utilization of information technology. This system is designed to minimize physical interactions between tax officers (fiscal authorities) and taxpayers to reduce the risk of maladministration and corruption. One of its key pillars is e-Filing, an electronic method for submitting Tax Returns (SPT) online in real-time via the official DGT website or through recognized tax application service providers. The presence of e-filing and other modern systems has been proven to streamline bureaucratic reporting processes.

2.4 Tax Literacy and Taxpayer Compliance

Tax literacy refers to the extent to which taxpayers are aware of, understand, and can apply tax laws and regulations. This encompasses not only theoretical knowledge but also practical capacities, such as calculating tax rates, utilizing digital reporting facilities, and understanding their rights and obligations as citizens. High tax literacy is believed to be linearly correlated with lower tax evasion. Taxpayer compliance is defined as the conscious and responsible fulfillment of all tax obligations in accordance with legally sanctioned provisions. Compliance can be categorized into formal compliance (timely reporting) and substantive compliance (accurateness of the amounts and content of calculations). From a behavioral economics perspective, compliance is influenced by the quality of services provided by tax authorities and public trust in government institutions administering taxes.

2.5 Financial Performance

According to Deswanto and Siregar (2018), financial performance refers to a company's ability to manage and control its resources effectively. Financial statements are generally used to inform decision-making. Appropriate analytical tools are necessary to make decisions that align with the entity's objectives. Through financial analysis, a company can monitor its financial condition and design its organizational structure (Njiru & Nyamute, 2018). Financial analysis is also applied to evaluate business opportunities and assess corporate performance, including financial ratios, strengths, and weaknesses, within the financial sector.

Financial performance is a key aspect to consider when evaluating how well a company achieves profitability, which is crucial for organizational sustainability (Rosmanidar, Putriana, & Nasution, 2024). This reflects the management's effectiveness in handling the financial aspects of the company. External stakeholders can assess a company's financial condition through various activities. These figures serve as a reference for external decision-making, enabling stakeholders to evaluate the corporate financial performance. Financial performance can be analyzed using ratios derived from financial statements and stock price data.

Financial performance reflects a company's ability to manage resources to generate profit (Devie, Liman, Tarigan, & Jie, 2020). In the coal mining sector, performance is influenced by commodity prices, operational efficiency, and strategic decisions regarding investment and CSR initiatives. Financial analysis tools, including ratios such as Return on Assets (ROA) and Return on Equity (ROE), measure management effectiveness in resource allocation and operational control. External factors such as regulatory compliance, environmental impact, and public perception also affect financial performance. Companies must balance short-term profitability and long-term sustainability by integrating CSR management and environmental costs into financial planning (Celestin, 2018).

Strong financial performance indicates the effective integration of these strategies and can facilitate access to capital and risk management. Financial performance also influences corporate resilience. Companies with sound financial health can invest in CSR and environmental programs without relying on external funding, thereby enhancing sustainability and trust in stakeholders. This study emphasizes that CSR management and environmental cost allocation function as strategic tools that support financial stability and long-term profitability in the coal-mining sector.

2.6 Corporate Social Responsibility

Corporate Social Responsibility (CSR) represents a collaboration between a company and its stakeholders through the implementation of corporate social responsibility to achieve its objectives. CSR is not solely based on financial considerations but also involves attention to the company's social environment to ensure business sustainability (Istan, 2024). According to Deswanto and Siregar (2018), CSR is a concept whereby companies voluntarily contribute to improving community welfare and maintaining environmental cleanliness by integrating social and environmental issues into business operations and interactions with stakeholders.

Over time, CSR has become crucial for every business entity because of the urgency of accommodating stakeholder interests to ensure organizational sustainability. CSR embodies a company's obligations to the environment and surrounding communities, extending beyond financial profit to encompass social welfare (Agustine & Ratmono, 2024). Many organizations allocate resources to CSR activities in response to stakeholders, which can reduce costs and optimize their long-term profits. CSR plays a critical role in fulfilling commitments to shareholders and other stakeholders, building and maintaining strong relationships, and enhancing corporate financial performance.

Management must actively involve all stakeholders in formulating effective strategies. Transparency in CSR, which emphasizes the fulfillment of stakeholder needs, can improve financial performance (Barlinti & Aris, 2023). CSR represents a company's commitment to social and environmental responsibility, beyond financial gains. In the coal mining sector, CSR programs may include land reclamation, community development, waste management, and transparent reporting of social initiatives (Singh & Mishra, 2016). CSR indirectly impacts financial performance by enhancing reputation, strengthening stakeholder relationships and mitigating social risks.

Companies actively engaged in CSR are more likely to attract investor interest, reduce potential social conflicts and gain operational legitimacy. Effective CSR requires strategic planning, proper resource allocation, and executive involvement to align social initiatives with corporate objectives. CSR also offers competitive advantages to companies. Proactive and transparent CSR allows mining companies to demonstrate their social responsibility, build trust, and secure long-term investments. Therefore, CSR is not merely a cost burden but a strategic investment that can enhance financial performance and sustainability.

2.7 Financial Slack

Financial slack, defined as a surplus of resources exceeding current operational needs, is considered a supporting instrument for companies to expand higher-risk business activities, such as developing new products or services (Nazwir & Raharja, 2024). From the perspective of financial slack theory, companies with financial reserves tend to have a superior capacity to invest in increasingly effective CSR activities (Mandasari & Rikumahu, 2024). Astuti and Alam (2025) indicate that average shareholder returns, market yield stability, stock returns, changes in dividend patterns, and stock performance substantially contribute to overall financial performance. This suggests that the availability of extra financial reserves is a crucial driver motivating companies to participate in CSR activities, which can enhance their financial performance. Financial resources play a vital role in determining a company's engagement in social activity. The availability of financial slack indicates that a company's financial condition allows investment in social and environmental activities without compromising the fundamental economic requirements that sustain profitability, ultimately improving financial performance (Tarigan & Yuliansyah, 2025).

Financial slack represents a surplus of financial resources beyond ongoing operational needs, providing companies with the capability to invest in high-risk initiatives, such as CSR or new project development, without requiring external financing (Lu, Liu, & Osiyevskyy, 2023). In the coal mining sector, adequate financial slack enables firms to fund social and environmental programs, manage market volatility and respond to regulatory changes. Companies with sufficient financial slack can strategically allocate funds to CSR and environmental management, thereby balancing profitability and social responsibility. Conversely, companies with minimal slack may postpone or reduce CSR investment, potentially harming their long-term reputation and financial performance. Financial slack also serves as a buffer against operational and social risks by enhancing resilience to litigation, regulatory changes and market volatility. In this study, financial slack functions as a supporting factor for the effective implementation of CSR and environmental cost management, which, in turn, can improve financial outcomes.

2.8 Environmental Costs

Environmental costs arise from deteriorating environmental standards caused by an institution's operational activities (Rosmanidar et al., 2024). Companies that openly disclose their environmental costs are perceived as transparent because they provide shareholders with information that funds have been specifically allocated to protect the environment and comply with applicable regulations. In this context, the disclosure of environmental costs can be interpreted as an effort to promote transparency and signal to investors that the company has allocated resources for environmental conservation and legal compliance (Temalagi, Darmawati, & Amiruddin, 2025).

In the coal mining sector, company operations generate significant environmental impacts, including land degradation, water and air pollution, and increased carbon emissions (Ivanova, Vesnina, Fotina, & Prosekov, 2022). Therefore, declaring environmental costs is essential for corporate accountability regarding operational impacts. Environmental cost disclosure projects the extent to which companies internalize external costs arising from natural resource exploitation activities, including mine reclamation, waste management, ecological restoration, and compliance-related costs.

Mining companies utilize environmental cost management to obtain and maintain social legitimacy from the public and government, given that mining activities are highly susceptible to social and regulatory scrutiny. The greater the environmental impact, the stronger is the public demand for transparent disclosure of environmental costs. Fundamentally, environmental costs are expenditures closely associated with the negative impacts of corporate operations, including land rehabilitation, waste governance and adherence to environmental regulations (Gupta, 1995). In coal mining, these costs reflect the level of transparency and accountability of stakeholders. Companies that disclose environmental cost data demonstrate a firm commitment to sustainability and legal compliance. Such transparency successfully mitigates reputational risks, enhances investor confidence, and reinforces social legitimacy.

Environmental cost management also affects financial performance by reducing potential financial penalties, increasing resource efficiency, and supporting operational continuity. Within the mining sector, investment in environmental management functions as a mitigation tool for ecological impacts such as land degradation, water and air contamination, and carbon emissions. The disclosure of these costs assures external stakeholders that the company fully acknowledges its environmental responsibilities. Accordingly, environmental costs act not only as a mechanism of legitimacy but also as an indirect driver of financial performance through risk management and engaging stakeholders.

Based on an extensive review of studies over the past decade, there is a noticeable inconsistency in the findings regarding the effects of corporate social responsibility, financial slack, and environmental costs on financial performance. This research gap motivates the present study to re-examine these relationships, specifically within the coal mining sector for the 2022–2024 period, a timeframe that precisely reflects the sector's current conditions. From this starting point, research hypotheses were formulated to bridge existing knowledge gaps.

3. Methodology

This study was conducted using a descriptive qualitative approach based on a literature review (library research). The collected data are entirely secondary, sourced from academic databases such as Google Scholar, the SINTA portal, and accredited national scientific journals published between 2021 and 2026. Conclusions were drawn through conceptual triangulation of various empirical findings from previous studies examining the relationship between the implementation of tax administration technology (particularly online reporting systems) and taxpayer literacy or understanding.

This study also adopted a quantitative approach. The objective of this research is to establish causal relationships between independent and dependent variables (Rezaee, Aliabadi, Dorestani, & Rezaee, 2020). The independent variables analyzed in depth include Corporate Social Responsibility (CSR), financial slack, and environmental costs. The dependent variable examined is Financial Performance. This study focuses on companies operating in the coal mining sector that are officially listed on the Indonesia Stock Exchange (IDX) during the 2022–2024 period. The research population consisted of 28 companies, and the sample included 13 coal mining companies listed on the IDX within the 2022–2024 timeframe, selected based on strict sampling criteria.

The operationalization of the variables is as follows: financial performance is precisely measured using the Return on Assets (ROA) ratio; CSR is quantified using the GRI G4 indicator framework; financial slack is calculated using the formula: FCF = (net income + interest expense + non-cash expenses) − Working Capital Increase − Capital Expenditure. Furthermore, Financial Slack is calculated as FCF divided by Total Revenue, while the environmental cost variable is measured based on the actual expenditures incurred by the company for environmental management. The dataset was subsequently analyzed using EViews version 12. The theoretical framework draws on stakeholder and legitimacy theories. Data were collected from official sources, including the Indonesia Stock Exchange website (www.idx.co), individual company websites, academic journals, and various other literature that provided a foundational basis for this study.

4. Results and Discussion

4.1 Effectiveness of Digital Systems and Tax Literacy

Through a synthesis of various empirical studies, consistent findings were observed. First, the use of e-filing applications positively and significantly improves the efficiency of tax reporting processes. Operational convenience, accessible anytime and anywhere, has effectively reduced administrative backlogs at Tax Service Offices (KPP) approaching tax return (SPT) deadlines. Second, the analysis of tax literacy indicates that taxpayers with adequate tax knowledge tend to utilize technological features more effectively. The success of the Coretax system transformation and similar digitalization initiatives demonstrates that tax understanding serves as a fundamental variable to ensure smooth administration at the user level.

The integration of tax technology and human resource development (taxpayers) is a key element of modernization. Digital transformation, realized through e-Filing and the modernization of service facilities, substantially streamlines bureaucratic procedures, increasing the likelihood of formal taxpayer compliance. Fast, secure, and reliable services generate satisfaction that reduces taxpayers' reluctance. However, digital infrastructure is merely a tool; its effectiveness depends heavily on users. Tax literacy plays a crucial role in this regard. Taxpayers with low knowledge levels are prone to confusion, even when system interfaces are designed to be user-friendly. Consequently, the Directorate General of Taxes (DGT) is required to invest in hardware and software and proactively engage academics, tax consultants, and university tax centers (such as the University of Lampung) to provide widespread taxpayer education.

4.2 The Influence of CSR, Financial Slack, and Environmental Costs

Based on the test results, the Corporate Social Responsibility (CSR) variable does not exert a significant effect on the financial performance of coal mining corporations listed on the Indonesia Stock Exchange during 2022–2024. Consequently, the first hypothesis (H_1), which posited that CSR influences financial performance, was rejected. These results indicate that the level of CSR disclosure and implementation by these companies is insufficient to immediately enhance their financial performance. A similar phenomenon is observed for financial slack. It was demonstrated that financial slack does not significantly impact the financial performance of coal mining companies listed on the Indonesia Stock Exchange in 2022–2024.

Therefore, the second hypothesis (H_2), which postulated that financial slack affects financial performance, is rejected. This finding confirms that the mere availability of flexible financial resources has not yet meaningfully (or significantly) strengthened a company's financial performance. Regarding environmental aspects, the analysis results show that actual environmental costs have a tangible impact on the financial performance of coal mining corporations listed on the Indonesia Stock Exchange (IDX) between 2022 and 2024. With this confirmation, the third hypothesis (H_3), which proposes that environmental costs affect financial performance, is firmly accepted in this study. These findings strongly indicate that the greater a company's investment in environmental management initiatives, the stronger its financial performance profile.

Table 1. Summary of Coal Mining Company Profits in 2025

Stock Code	6M25	6M24	Growth (%)
BUMI	US$ 20.4 million	US$ 84.9 million	-75.97
UNTR	IDR 8.13 million	IDR 9.53 million	-14.69
CUAN	US$ 1.94 million	US$ 29.6 million	-93.45
PTBA	IDR 833 million	IDR 2.03 billion	-58.97
INDY	US$ 2.24 million	US$ 21 million	-89.33
HRUM	US$ 29.8 million	US$ 37.4 million	-20.32
BYAN	US$ 349 million	US$ 377 million	-7.43

Table 1 shows overall most issuers experienced a decline in revenue in 6M25 compared to 6M24, with the sharpest decreases recorded by CUAN (-93.45%), INDY (-89.33%), and BUMI (-75.97%). BYAN recorded the smallest decline (-7.43%), followed by UNTR (-14.69%) and HRUM (-20.32%). This indicates overall pressure on sector performance during the period, although the magnitude of decline varies across companies.

Table 2. PT BUMI Coal Mining Net Profit in 2024

Year	Net Profit	Change (%)
2022	US$ 525.27 million	–
2023	US$ 10.92 million	Decreased 97.92

Table 2 shows the company's net profit declined significantly from US$ 525.27 million in 2022 to US$ 10.92 million in 2023, reflecting a sharp decrease of 97.92%. This indicates a substantial deterioration in financial performance over the period.

Table 3. Partial Test Results

Variables	Coefficient	Significance	Conclusion
CSR	-0.786934	0.4089	Not Supported
Financial Slack	-0.104137	0.6817	Not Supported
Environmental Costs	0.343602	0.0191	Supported

Table 3 shows CSR and financial slack have negative but insignificant effects and are not supported. In contrast, environmental costs have a positive and significant effect, indicating that only environmental costs are statistically supported in influencing the outcome variable. This study provides crucial insights into how Corporate Social Responsibility (CSR), financial slack, and environmental costs influence the financial performance of coal mining companies listed on the Indonesia Stock Exchange during the 2022–2024 period. The panel data regression model analysis reveals that environmental costs exert a statistically significant positive effect on financial performance, whereas CSR and financial slack do not demonstrate statistically significant impacts. These findings suggest that while investments in environmental management directly enhance financial outcomes, CSR initiatives and accumulated financial slack, if considered in isolation, may not immediately translate into higher profitability.

The lack of a significant relationship between CSR and financial performance implies that CSR initiatives implemented by various companies may still be limited in scope, misaligned with target objectives, or inadequately disclosed to influence investor perceptions and market valuations effectively. This observation aligns with prior studies, indicating that CSR must be strategically integrated with business operations and communicated transparently to stakeholders to positively impact financial performance. In the coal mining sector, CSR initiatives often revolve around community development and social program. Although these efforts may not yield immediate financial returns, they serve as long-term investments in corporate reputation and legitimacy. Furthermore, the degree of CSR disclosure varies widely among companies, with some failing to provide comprehensive or standardized reporting, potentially dampening observable impacts on financial metrics.

A similar pattern is observed for the effect of financial slack on firms' financial performance. Although surplus financial resources provide firms with flexibility, they do not automatically result in improved financial outcomes if the resources are not strategically allocated. Financial slack can support CSR and environmental initiatives, stimulate innovation, and enhance operational efficiency. However, if these resources are not effectively managed or directed toward value-generating activities, their contribution to profitability may be minimal or even negative. This underscores the importance of prudent financial management and strategic planning in leveraging financial slack to enhance firm performance.

In contrast, the positive and significant effect of environmental costs provides clear evidence that companies actively investing in mitigating the environmental consequences of their operations experience enhanced financial performance. Several mechanisms may explain this relationship. First, higher environmental expenditure effectively reduces potential liabilities related to environmental regulations, fines, and remediation costs. Second, these actions signal to investors and stakeholders that the company operates sustainably, thereby enhancing its legitimacy, trust, and long-term investor confidence. Third, efficient environmental management can lead to operational efficiencies, such as optimized resource consumption, energy savings, and waste reduction, which can positively affect profitability.

The coefficient of determination (R^2) for the combined model indicates that CSR, financial slack, and environmental costs collectively explain approximately 38.35% of the variation in the financial performance. Although this represents moderate explanatory power, it also suggests that other factors, such as corporate governance, market conditions, commodity price volatility, and operational efficiency, play a substantial role in shaping financial outcomes. Partial effect analysis further confirmed that environmental cost management is the primary driver influencing financial performance in the coal mining sector.

These findings have practical implications for corporate management. Companies should prioritize transparent and effective environmental management programs, as these initiatives generate measurable financial advantages. While CSR and financial slack remain central to long-term strategic planning and reputation maintenance, managers must ensure that these initiatives are seamlessly integrated into operational and financial strategies to maximize their contribution to financial performance. Moreover, this study emphasizes the urgent need for standardization in CSR reporting and environmental cost disclosure to optimize the value derived from such initiatives for all stakeholders, including investors.

5. Conclusions

5.1 Conclusion

Based on the conducted study, it can be concluded that the implementation of the e-Filing system, combined with high taxpayer literacy, is effective and significant in enhancing taxpayer compliance. The availability of technology reduces administrative barriers, and public understanding strengthens the integrity of the self-assessment system. This study aimed to thoroughly examine the effects of Corporate Social Responsibility (CSR) disclosure, financial slack, and environmental costs on the financial performance of coal mining companies listed on the Indonesia Stock Exchange during 2022–2024. Based on the findings discussed previously, the following conclusions were drawn.

The results indicate that CSR and financial slack do not significantly affect the financial performance of the observed coal mining corporations. Environmental costs also fail to show a direct impact on financial performance in the same group of firms. From the perspective of the coefficient of determination (R^2), the combined influence of CSR reporting, financial slack, and environmental costs accounts for approximately 38.35% of the variance in the financial performance.

5.2 Research Limitations

This academic study is not without limitations, which should be carefully considered in future research. First, the sample size utilized in this study is relatively small because the focus was limited to a single industry sector. Consequently, the conclusions drawn may not fully represent or generalize the conditions of other industrial sectors. Second, the observation period of this study was relatively short, spanning only three years (2022–2024), which limits the ability to provide a comprehensive depiction of trends over a longer timeframe.

5.3 Recommendations for Future Research

Tax authorities should intensify the dissemination of digital systems in parallel with basic tax education, particularly targeting novice taxpayers and MSMEs. This study is expected to serve as a reference for subsequent research exploring the effects of CSR disclosure, financial slack, and environmental expenditures on financial performance. Future studies should incorporate additional variables beyond those examined in this study, expand the research population, integrate supplementary factors potentially influencing financial performance, and extend the study period to achieve a more comprehensive understanding of the determinants of corporate financial outcomes. Such variables may include aspects of Good Corporate Governance (GCG), Environmental, Social, and Governance (ESG) factors, and other relevant metrics that are likely to significantly influence financial performance. By broadening the analytical scope, future research can provide deeper insights into the mechanisms that drive corporate financial success.

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