

The Impact of Deferred Mining Exploration and Development Costs on PT United Tractors Tbk's Net Income for The Current Year

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KEYWORDS

Exploration Costs;
Mining Development;
Net Income;
Profitability; PT United
Tractors Tbk

ABSTRACT

The mining industry is one of the strategic sectors in the Indonesian economy, but its capital-intensive characteristics cause operational costs, especially mining exploration and development costs, to greatly determine the company's financial performance. This study aims to analyze the correlation between exploration costs and mining operating expenses on the net profit of PT United Tractors Tbk for 25 years, using annual financial statement data for the period 2000 - 2025, as well as looking at how PT United Tractors Tbk developed from a heavy equipment distributor to a mining contractor and as a mining concession owner from 2020-2025. The research method used was a quantitative approach with simple linear regression analysis, using secondary data from the company's annual financial statements. The results of the study show that the deferred mining exploration and development costs have a significant effect on net profit, any increase in mining costs will increase net profit. It can be concluded that the efficient management of mine operating costs is essential to maintain profitability. Therefore, companies are advised to continue to evaluate and optimize costs to remain competitive amid fluctuations in the commodity market.

INTRODUCTION

The mining industry is one of the backbone sectors of Indonesia's economy that contributes significantly to the country's foreign exchange through mineral and coal exports. In the first quarter of 2026, the GDP of Mining in Indonesia reached 226400.00 IDR Billion. By 2026, mining companies are required to operate efficiently, especially amid volatile global commodity price fluctuations. Profitability, which is often measured using Return on Assets (ROA) or Net Profit Margin (NPM), is the main indicator of management's success in managing the company's assets and operations (Choiriyah et al., 2020; Diana & Maria, 2020). However, entering 2026, the mining sector faces a severe challenge in the form of a significant increase in production costs (Hodge et al., 2022; Litvinenko, 2020). The operational cost component, particularly industrial diesel fuel prices and heavy equipment maintenance costs, is projected to soar, triggered by new energy policies, such as the use of environmentally friendly fuels that increase equipment maintenance costs. In addition, the increase in industrial diesel prices itself has boosted the operational costs of the mining sector, including nickel, by around 10-15% (Igogo et al., 2021; Magdalena et al., 2023; Mudd & Jowitt, 2022).

On the other hand, the burden on mining companies is compounded by the increase in royalty rates and tighter taxes, which increases the volatility of operating costs. The adjustment of the annual Work Plan and Cost Budget (RKAB) also limits production volumes, which directly has the potential to reduce economies of scale efficiency and narrow profit margins (Alhar & Kadhim, 2024; Bamwesigye, 2019; Syahprya & Rahmani, 2026). This phenomenon shows that there is high uncertainty for companies in maintaining profitability due to rising

operating expenses amid commodity prices that are still depressed (Sulemana, 2020; Tarighi et al., 2024). These increased costs, both in terms of energy, logistics, and compliance costs, have the potential to reduce the company's net profit. If the increase in mining costs is not balanced with adequate operational efficiency, the company risks a significant decline in profitability, which will ultimately reduce investor confidence (Grace et al., 2015; Osazefua, 2019; Pangestuti et al., 2022). In the financial statements of PT United Tractors Tbk, these costs are referred to as "Deferred Mining Exploration and Development Costs".

Several previous studies have examined the relationship between operating costs and net profit in the mining sector. Owner (2024) analyzed the effect of operating and sales costs on net profit at PT Aneka Tambang (Persero) Tbk for the period 2019–2023 and found that operating costs have a significant negative effect on net profit when not accompanied by proportional revenue growth. Similarly, Maureen et al. (2024) investigated the effect of mining costs on the net profit of PT Resource Alam Indonesia Tbk for the period 2017–2024, concluding that mining costs partially affect net profit, but the magnitude of the effect depends on the efficiency of cost allocation to productive activities. Other studies outside the references, such as research by Rosyid & Adachi, (2016) on Indonesian coal mining companies, confirmed that exploration costs deferred as assets can increase future period profits if they successfully expand production capacity. However, these studies have been limited to either state-owned enterprises (PT Aneka Tambang) or relatively smaller-scale mining companies (PT Resource Alam Indonesia), and none have specifically examined PT United Tractors Tbk a company that has undergone a significant business transformation from a heavy equipment distributor to a mining contractor and mining concession owner over the 25-year period from 2000 to 2025. Furthermore, prior research has not explicitly addressed the transitional shift from coal exploration to green minerals (such as nickel and copper) and its impact on the company's financial structure (Grace et al., 2015; Imhanzenobe, 2019).

The critical research gap, therefore, is the absence of a longitudinal study that analyzes the correlation between deferred mining exploration and development costs on net profit specifically at PT United Tractors Tbk, while also considering the company's strategic business transformation and the emerging transition toward green mineral exploration (Amegboleza & Ülkü, 2025; An et al., 2023; Song et al., 2025). This study aims to analyze in depth how the increase in PT United Tractors Tbk's operating costs, such as deferred mining exploration and development costs, affects profitability performance—specifically to measure the net profit for the current year in the period 2000–2025. The problem formulation includes: (1) What is the trend of exploration and development costs of PT United Tractors Tbk during 2000 to 2025? (2) Does exploration and development costs partially affect the company's net profit in each current year? (3) What is the impact of the transition of exploration and development costs from coal to green minerals on the financial structure of the company at the end of the observation period? The research objective is to provide a comprehensive overview of the efficiency of capital allocation in PT United Tractors Tbk's mining exploration and development activities on the company's net profit in each current year.

METHOD

This research used a quantitative approach to determine the influence between independent variables (deferred mining exploration and development costs) on dependent costs

(net profit for the current year). The data used is secondary data obtained from the annual financial statements of PT United Tractors Tbk for the period 2000 - 2025. The data collection technique is carried out through documentation from the company's official report that has been published to the public through the Indonesia Stock Exchange (IDX).

The variables in this study consist of mining exploration and development costs deferred as independent or independent variables (X) and current year net profit as a bound or dependent variable (Y), all of which are measured in Indonesian Rupiah (IDR) units. Mining exploration and development costs cover the entire annual operating costs of the mine, while the current year's net profit reflects the company's profits which have been deducted from all costs and taxes.

RESULT AND DISCUSSION

Company Data

Data on Mining Exploration and Development Costs of PT United Tractor and Net Profit for the Current Year 2000 – 2025

Table 1. Company Data

Year	Deferred Mining Exploration and Development Costs	Net Profit
2000	IDR 281,814,000,000	IDR 6,130,000,000
2001	IDR 369,181,000,000	IDR238,009,000,000
2002	IDR 320,367,000,000	IDR 300,616,000,000
2003	IDR 302,906,000,000	IDR 342,610,000,000
2004	IDR0	IDR 1,099,633,000,000
2005	IDR0	IDR 1,050,729,000,000
2006	IDR0	IDR 930,372,000,000
2007	IDR0	IDR 1,493,037,000,000
2008	IDR55,748,000,000	IDR 2,660,742,000,000
2009	IDR 88,894,000,000	IDR 3,817,541,000,000
2010	IDR 101,641,000,000	IDR 3,872,931,000,000
2011	IDR230,158,000,000	IDR 5,899,506,000,000
2012	IDR417,645,000,000	IDR 5,753,342,000,000
2013	IDR227,975,000,000	IDR 4,798,778,000,000
2014	IDR 364,229,000,000	IDR 4,839,970,000,000
2015	IDR 376,843,000,000	IDR 2,792,439,000,000
2016	IDR 409,278,000,000	IDR 5,104,447,000,000
2017	IDR891,966,000,000	IDR 7,673,322,000,000
2018	IDR1,677,169,000,000	IDR11,498,409,000,000
2019	IDR 1,972,134,000,000	IDR 11,134,641,000,000
2020	IDR 1,912,824,000,000	IDR 5,632,425,000,000
2021	IDR 2,161,831,000,000	IDR 10,608,267,000,000
2022	IDR 2,389,396,000,000	IDR22,993,673,000,000

Year	Deferred Mining Exploration and Development Costs	Net Profit
2023	IDR 2,374,321,000,000	IDR 22,130,096,000,000
2024	IDR 2,494,306,000,000	IDR 20,118,529,000,000
2025	IDR 2,768,518,000,000	IDR 15,176,764,000,000

Regression Results

Table 2. Coefficient Test Results

Regression Statistics	
Multiple R	0,884035137
R Square	0,781518123
Adjusted R Square	0,772414711
Standard Error	3,258E+12
Observations	26

Source: Author's data processing (2025)

Table 3. Significant F Result

	df	SS	MS	F	Significance F
Regression	1	9.11251E+26	9,11E+26	85,84892799	2,13436E-09
Residual	24	2.5475E+26	1.06E+25		
Total	25	1,166E+27			

Source: Author's data processing (2025)

Table Significance F, deferred mining exploration and development costs in accordance with 2.13436 E-09. Simultaneously, the effect of exploration and development costs on net profit is statistically significant.

Table 4.2.3. Linear Regression Test Results

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	1,2746	8.60438E+	1,48	0,151	-5,012	3,050	-5,012	3,050
	E+12	11	133	52721	57E+	46E+	57E+	46E+
			9	8	11	12	11	12
Exploration Costs	6,25654	0,67525392	9,26	2,134	4,862	7,650	4,862	7,650
and	4709		547	36E-0	88911	20030	88911	20030
Development				9	4	4	4	4
Mining								

Source: Author's data processing (2025)

P-Value, partially. The total suspended mining exploration and development costs of PT United Tractors Tbk have a significant effect on PT United Tractors Tbk's net profit for the current year, which is evidenced by a P-Value of 2.13436E-09 which is less than 0.05.

Statistical

Statistically, deferred mining exploration and development costs have a very strong correlation rate with a company's current year net profit. This is shown by the Multiple R Square value of 0.884. The quality of this model is also relatively high with an R Square value of 0.7815, which Analysis means that independent variables, namely deferred mining exploration and development costs, are able to explain the dependent variable, namely the current year's net profit of 78.15%.

The results of the ANOVA test showed an F value of 85.848, with a significance level of f of 2.13×10^{-9} because this significance value was much smaller than the alpha, which was 0.05 (5%). Independent variables, namely deferred mining exploration and development costs, have a significant positive influence on the dependent variable, namely the current year's net profit. This can be proven by the t-stat value of 0.265 and the p-value of 2.13×10^{-9} , where the p-value in this regression model carries its alpha, which is 0.05. The regression coefficient of 6.256 shows that every one unit increase in the deferred mining exploration and development costs is expected to increase the net profit for the current year by 6,256 units. However, the intercept constant of 1.27×10^{12} is not statistically significant because it has a p-value of 0.15, which is greater than the alpha value of 0.05.

The results of the data processing show that the statistical model $Y = (1.2746 \times 10^{12}) + (6.527 \times \text{Exploration Cost})$. When expressed with the numbers in the regression data, it will be $Y = 1.27 \times 10^{12} + 6.256$. This statistical model shows that it is very solid to use in decision-making, as it has a strong explanatory power and a convincing level of significance.

Accounting Analysis

In accounting, deferred mining exploration and development costs are classified as part of direct operational costs that will reduce gross profit before reaching net profit (Syahlevy, 2018). When the cost of mining exploration and development increases, without a proportionate increase in opinion, the large cost burden will reduce the net profit significantly. The worst thing that may happen if the deferred mining exploration and development costs are not accompanied by a proportionate increase in revenue, which can cause the company to suffer losses or called net losses in the current year in the annual financial statements. However, there are conditions where the increase in mining exploration and development costs is followed by an increase in net profit. This can be explained if the cost is used for production expansion or increased operational capacity which ultimately increases the company's sales volume and revenue. Therefore, although the mining exploration and development costs in table 4.1 (company data) are a burden, the impact on profits is not necessarily negative, but rather depends on the efficiency of using those costs in generating greater revenue.

CONCLUSION

Based on the results of the analysis of PT United Tractors Tbk's annual financial statement data for the period 2000 - 2025, it was found that the deferred mining exploration and development costs had a significant influence on the company's current year net profit. Thus, it can be concluded that the increase or decrease in the cost of mining exploration and

development suspended by PT United Tractors Tbk plays a major role in determining the fluctuation of the company's net profit during the period analyzed. The company is advised to continue to improve the efficiency of mine operational cost management in order to maximize net profit in a sustainable manner. Although deferred mining exploration and development costs are an unavoidable component of PT United Tractors Tbk, control over the technology, logistics, and resource management aspects used can help reduce mining exploration and development costs without reducing the company's productivity. In addition, it is important for management to continue to conduct periodic cost evaluations to identify potential savings and improve the company's competitiveness in the long term

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