

Analysis Of The Effects Of Financial Leverage And Operating Leverage On The Profitability Of Pt Bukit Asam Tbk

Citra Nuradi Cahayu¹, Nurul Huda², Muhammad Yusuf³

^{1,2,3}Studi Program of Management, Sekolah Tinggi Ilmu Ekonomi (STIE) Bima

Corresponding author: citranuradicahayu@gmail.com

Abstract

This study aims to analyze the effects of financial leverage and operating leverage on profitability at PT Bukit Asam Tbk for the period 2015–2025. Profitability is measured using Return on Equity (ROE), financial leverage is measured by the Degree of Financial Leverage (DFL), and operating leverage is measured by the Degree of Operating Leverage (DOL). This study employs an associative quantitative method using secondary data obtained from the annual financial statements of PT Bukit Asam Tbk. The data analysis techniques used include classical assumption tests, multiple linear regression analysis, correlation coefficients, coefficients of determination, t-tests, and F-tests, conducted using SPSS version 26. The results show that, when analyzed individually, financial leverage does not have a significant effect on profitability. Similarly, operating leverage also does not have a significant effect on profitability. When analyzed simultaneously, financial leverage and operating leverage do not have a significant effect on profitability. Thus, the profitability of PT Bukit Asam Tbk is more influenced by external and other operational factors than by financial leverage and operating leverage.

Keywords: Financial leverage, operating leverage, profitability, return on equity.

INTRODUCTION

The increasingly competitive business environment requires companies to effectively manage their financial and operational structures in order to achieve optimal performance. Intensifying competition drives companies to develop a competitive advantage so they can ensure their business sustainability (Angelita & Ali, 2024).

1727

IJEBIR, Volume 05 Issue 04, 2026



Copyright at authors some right reserved this work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

Essentially, every company operates with the primary goal of achieving optimal profitability to increase value for shareholders and ensure the company's future sustainability (Setiawati & Lim, 2015). Without strong profitability, a company's business continuity is at risk. Therefore, company management is required to make sound decisions regarding both financial and operational management to ensure that established profit targets are met. A company's ability to generate profits can be measured by its profitability ratio. Profitability refers to a company's capacity to generate profits by utilizing all available resources over a specific period. Profitability ratios are used to assess the effectiveness of management in managing the company's assets, capital, and operational activities to generate profits. According to Kasmir (2020), profitability is a ratio used to measure a company's ability to generate profits. In this study, profitability is measured using Return on Equity (ROE), a ratio that indicates a company's ability to generate net income based on its equity. The higher the ROE value, the better the company's ability to provide a rate of return to shareholders (Firmansyah, 2019).

In the context of financial management, leverage is divided into two main categories: financial leverage and operating leverage. Financial leverage is a financing strategy that utilizes debt or fixed-interest financing instruments to increase profits for both the company and its shareholders. According to Brigham & Houston as cited in Widiyanti & Elfina (2015), financial leverage is the extent to which fixed-income securities (debt and preferred stock) are used in a company's capital structure. One of the main advantages of financial leverage is a company's ability to obtain additional capital without increasing its internal capital, allowing these funds to be flexibly allocated to support both operational activities and long-term investments. In line with this, Widiyanti & Elfina (2015) argue that the use of debt can also increase profits by utilizing borrowed funds at a lower cost than the desired rate of return on investment. In this study, financial leverage is measured using the Degree of Financial Leverage (DFL) approach, which is a ratio used to measure the sensitivity of a company's net income to changes in operating income or EBIT (Earnings Before Interest and Taxes).

In addition to financial leverage, companies also face operating leverage, which relates to the use of fixed operating costs in business activities. According to Hanafi in Persada & Ariyani (2019), operating leverage can be defined as the extent to which a company utilizes fixed operating expenses. Fixed operating expenses typically stem from the use of fixed costs in a company's operational activities, such as depreciation expenses, fixed salaries, and administrative costs. According to Syamsuddin (2020), operating leverage indicates the degree of change in operating profit resulting from

1728



changes in sales volume. The higher the level of operating leverage, the greater the change in operating profit resulting from changes in sales. In this study, operating leverage is measured using the Degree of Operating Leverage (DOL), a ratio used to measure the sensitivity of operating profit to changes in sales.

PT Bukit Asam Tbk is one of the largest coal mining companies in Indonesia and plays a vital role in supporting the nation's energy needs. PT Bukit Asam Tbk is widely recognized as a company engaged in coal mining, processing, transportation, and trading. The company originated from Perusahaan Negara Tambang Arang Bukit Asam (PN TABA), which was established to manage Indonesia's coal resources and later changed its status to PT Tambang Batubara Bukit Asam (Persero) in 1981. PT Bukit Asam Tbk (PTBA) was officially listed on the Indonesia Stock Exchange (IDX) on December 23, 2002, through an Initial Public Offering (IPO). As a publicly traded company operating in the capital-intensive mining industry, PT Bukit Asam Tbk is required to maintain its financial performance and improve the company's profitability in order to provide added value to its shareholders. The following table presents data on Sales, EBIT, Net Income After Tax, Total Equity, and Number of Shares Outstanding for PT Bukit Asam Tbk for the years 2015–2025.

Table 1. Data on Sales, EBIT, Net Profit After Tax, Total Equity, and Number of Shares Outstanding for PT. Bukit Asam Tbk from 2015 to 2025.

(Data is presented in millions of rupiah, unless otherwise stated)

Year	Sales (Rp)	EBIT (Rp)	Net Profit After Tax (Rp)	Total Equity (Rp)	Number of Shares Outstanding (Shares)
2015	13.733.627	2.414.340	2.037.111	9.287.547	2.108.075.150
2016	14.058.869	2.530.807	2.024.405	10.552.405	2.108.075.149
2017	19.471.030	5.898.515	4.547.232	21.987.482	10.540.375.745
2018	21.166.993	6.224.069	5.121.112	24.172.933	10.540.375.750
2019	21.787.564	5.014.355	4.040.394	18.422.826	11.190.363.250
2020	17.325.192	2.520.425	2.407.927	16.939.169	11.184.061.250
2021	29.261.468	9.959.025	8.036.888	24.253.724	11.487.209.350
2022	42.648.590	15.145.421	12.779.427	28.916.046	11.487.209.350
2023	38.488.867	7.202.709	6.292.521	21.563.196	11.487.209.350



2024	42.764.968	5.652.418	5.139.423	22.643.812	11.514.357.250
2025	42.651.724	3.208.073	2.959.236	22.616.801	11.514.357.250

Data Source: Processed Secondary Data, 2026

Based on Table 1, it can be seen that sales declined in 2020 due to the economic and business slowdown caused by the COVID-19 pandemic, as well as in 2023 and 2024 due to the plunge in global coal prices compared to the previous year. PT Bukit Asam Tbk's EBIT declined in 2019 and 2020, rose briefly in 2021 and 2022, but fell again from 2023 to 2025. The decline in EBIT during those years was primarily due to falling global coal prices and rising operating costs. PTBA's net income after tax declined in 2016, 2019, 2020, 2023, 2024, and 2025. This decline was primarily due to a decrease in the average selling price (ASP) of coal. PT Bukit Asam Tbk's total equity decreased in 2019, 2020, 2023, and 2025; generally, this decline was caused by a decrease in net income, which reduced retained earnings, as well as dividend distributions to shareholders. Furthermore, PTBA's number of shares outstanding decreased in 2019 to 11,184,061,250 shares due to treasury shares resulting from a buyback, which are not counted as shares outstanding.

Previous research conducted by Rahmawati et al. (2023) indicated that financial leverage (DFL) has a significant effect on profitability, as measured by ROE. Research by Puspitasari et al. (2020) found that operating leverage (DOL) has a significant positive effect on profitability. Meanwhile, research by Putra & Kadang (2020) found that DFL does not have a significant effect on profitability; similarly, Arijal et al. (2025) found that operating leverage has no effect on profitability (ROE). Furthermore, research by Putra & Kadang (2020) showed that, when analyzed simultaneously, operating leverage—measured by the degree of operating leverage (DOL)—and financial leverage—measured by the degree of financial leverage (DFL)—have a significant effect on profitability as measured by ROE. This phenomenon indicates a discrepancy in research findings; therefore, the urgency of this study is to provide a more specific and up-to-date contribution to mining companies such as PT. Bukit Asam Tbk. The differences between previous studies and the present study lie in the research subject, variables, and the research period and timeframe. The novelty of this study lies in its focus on the long-term performance of PT Bukit Asam Tbk, taking into account developments in a highly competitive industry, as well as the use of leverage—specifically, the use of debt to finance assets—which prompted the researcher to conduct a study titled “Analysis of the



Effects of Financial Leverage and Operating Leverage on the Profitability of PT Bukit Asam Tbk.”

LITERATURE REVIEW

THEORETICAL FRAMEWORK

1. Financial Leverage

Financial leverage is the use of funding sources derived from debt alongside equity in a company's capital structure. The use of funds from debt generates a fixed obligation in the form of interest that must be paid by the company, whether it generates a profit or suffers a loss (Hidayat & Galib, 2019). According to Hamid et al. (2015), Financial leverage is the use of funds that incur fixed costs with the expectation of increasing corporate profits so that it can boost Earnings Per Share (EPS). Thus, the use of debt is expected to enhance the rate of return received by shareholders. Furthermore, Kumalasari & Widyawati (2016) state that Financial leverage reflects the level of sensitivity of changes in Earnings Per Share (EPS) due to changes in operating profit (EBIT). This level of sensitivity is measured using the Degree of Financial Leverage (DFL). DFL shows the percentage change in EPS caused by a percentage change in EBIT.

In this study, Financial leverage is measured using the Degree of Financial Leverage (DFL), which can be formulated as follows:

$$DFL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}} \times 100\%$$

Source: (Kasmir, 2019)

2. Operating Leverage

Operating leverage is the use of fixed operating costs in company activities aimed at increasing operating profit. A company with a high level of operating leverage will experience a larger increase in profit when sales increase, but it also faces higher risks when sales decline (Erniza et al., 2025). According to Rodoni & Ali in Jannah & Cahyono (2020), operating leverage indicates the extent to which a company uses fixed costs in its operational structure so that it can affect the company's operating profit. Meanwhile, according to Hidayat & Galib (2019), operating leverage is a company's ability to utilize fixed operating costs to generate a larger change in profit compared to the change in

1731



sales levels. Furthermore, Kumalasari & Widyawati (2016) state that Operating leverage indicates the level of sensitivity of operating profit (EBIT) toward changes in sales. This level of sensitivity is measured using the Degree of Operating Leverage (DOL). The Degree of Operating Leverage (DOL) is a measure of how sensitive profits are to changes in sales.

Operating leverage acts as a multiplier. In this study, Operating leverage is measured using the Degree of Operating Leverage (DOL), which can be formulated as follows:

$$DOL = \frac{\% \text{ Change in EBIT}}{\% \text{ Change in Sales}} \times 100\%$$

Source: (Kasmir, 2019)

3. Profitability

Profitability is a proportion that shows the capacity to monitor debt to obtain profit and fulfill obligations (Fahmi, 2019). Profitability represents an industry's capacity to gain profit relative to total assets, equity, and sales. According to Sartono in Barita & Ekadjaja (2025), a higher profitability value demonstrates a better corporate capacity or efficiency in earning profits, and vice versa. Return On Equity is a ratio to measure Net Income After Tax or EAT (Earning After Tax) against equity (Kasmir, 2019). The higher this ratio, the better the company's condition because the position of the owners becomes stronger. According to Manggale & Widyawati (2010), Return On Equity (ROE) is a profitability ratio used to measure a company's ability to generate net income after tax. ROE is a measure of profitability viewed from the shareholders' perspective.

In this study, profitability is measured using Return on Equity (ROE), which can be formulated as follows:

$$ROE = \frac{\text{Net Profit After Tax}}{\text{Total Equity}} \times 100\%$$

Source: (Kasmir, 2019)

4. The Effect of Financial Leverage on Profitability

Financial leverage indicates the use of funding sources derived from debt in a company's capital structure. Financial leverage is measured using the Degree of Financial Leverage (DFL), which describes the sensitivity level of net income to changes in operating profit (EBIT). The use of debt can increase corporate profitability as long as the generated rate of return on investment is greater than the interest expense that must



be paid. However, if the amount of debt continues to increase beyond the company's capability to meet its obligations, the resulting interest charges will reduce profitability. Thus, Financial leverage has a close relationship with a company's profitability level. Research conducted by Rahmawati et al. (2023) concluded that the Degree of Financial Leverage (DFL) has a significant effect on company profitability measured using ROE. However, Putra & Kadang (2020) showed that DFL does not affect company profitability.

H1: Financial leverage has a partial significant effect on the profitability of PT Bukit Asam Tbk.

5. The Effect of Operating Leverage on Profitability

Operating leverage is measured using the Degree of Operating Leverage (DOL), which is the comparison between the percentage change in operating profit (EBIT) and the percentage change in sales. The higher the DOL value, the greater the sensitivity of operating profit to changes in sales volume. A company with a high level of operating leverage has relatively large fixed operating costs, so a small change in sales can produce a significant change in operating profit. However, an operating leverage that is too high can also increase business risk when sales decline. Therefore, operating leverage becomes one of the factors that can affect a company's profitability level. The results of research conducted by Puspitasari et al. (2020) show that Operating leverage has a significant effect on profitability. The larger a company's DOL, the greater the impact of sales changes on the profits earned by the company. However, research by Arijal et al. (2025) shows that DOL has no effect on company profitability.

H2: Operating leverage has a partial significant effect on the profitability of PT Bukit Asam Tbk.

6. The Effect of Operating Leverage and Financial Leverage on Profitability

Operating leverage and Financial leverage are two factors that can influence a company's ability to generate profits. Operating leverage relates to the use of fixed operating costs, while Financial leverage relates to the use of funds that carry fixed interest costs. The combination of both leverages can influence the profit levels obtained by the company. Research conducted by Putra & Kadang (2020) shows that simultaneously, DFL and DOL have a significant effect on company profitability. An analysis of the effect of Financial leverage and Operating leverage on profitability is



necessary to determine the extent to which these two variables affect company performance.

H3: Financial leverage and Operating leverage simultaneously have a significant effect on the profitability of PT Bukit Asam Tbk.

RESEARCH HYPOTHESES

A hypothesis is a temporary answer to the research problem formulation, where the problem formulation has been stated in the form of declarative sentences. It is considered temporary because the given answer is only based on relevant theories and has not yet been supported by empirical facts obtained through data collection (Sugiyono, 2019).

The conceptual framework of this research is illustrated as follows:

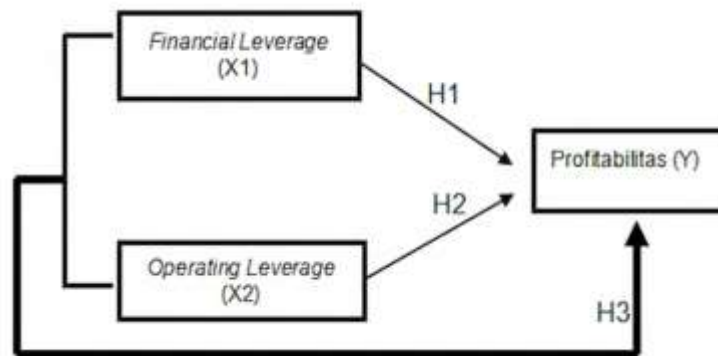


Figure 1. Conceptual Framework

Diagram Description:

→ = Partially
 → = Simultaneously

Research Hypotheses:

H1: Financial leverage has a significant partial influence on the profitability of PT Bukit Asam Tbk.

H2: Operating leverage has a significant partial influence on the profitability of PT Bukit Asam Tbk.

H3: Financial leverage and Operating leverage simultaneously have a significant influence on the profitability of PT Bukit Asam Tbk.

RESEARCH METHODOLOGY

Research Type

This research is an associative quantitative study. According to Sugiyono (2019), associative research is a study that aims to determine the relationship or influence between two or more variables. This study is conducted to analyze the influence of Financial Leverage (X1) and Operating Leverage (X2) on Profitability (Y) at PT Bukit Asam Tbk during the 2015–2025 period.

Research Instrument

A research instrument is a tool used to collect and measure data related to the phenomenon being studied (Sugiyono, 2019). In this study, the instrument used consists of secondary data obtained from the annual financial statements of PT Bukit Asam Tbk. The data used include sales, total equity, operating profit (EBIT), net profit after tax, number of outstanding shares, and other necessary financial data to calculate Financial Leverage, Operating Leverage, and Profitability over the 2015–2025 period.

Research Population And Sample

According to Sugiyono (2019), population is a generalization area consisting of objects or subjects that possess specific qualities and characteristics determined by the researcher to be studied and subsequently drawn into conclusions. PT Bukit Asam Tbk (PTBA) officially listed its shares on the Indonesia Stock Exchange (IDX) on December 23, 2002, using the stock code PTBA. The population in this study comprises all published annual financial statements of PT Bukit Asam Tbk.

A sample is a part of the size and characteristics possessed by that population (Sugiyono, 2019). The sample in this study consists of the annual financial statements of PT Bukit Asam Tbk for the 2015–2025 period, resulting in a total dataset (N) of 11 years of observation. The sampling technique utilized is purposive sampling, which is a sample determination technique based on specific criteria.

Research Location

This research is located at PT Bukit Asam Tbk, which is headquartered at Jl. Parigi No.1, Tanjung Enim, Lawang Kidul District, Muara Enim Regency, South Sumatra, Indonesia. This study is conducted by retrieving company financial statement data available at www.idx.co.id



DATA COLLECTION TECHNIQUES

The data collection techniques employed in this study are as follows:

1. Documentation

In this study, documentation was carried out by collecting the annual financial statements of PT Bukit Asam Tbk for the 2015–2025 period. The data were obtained from annual reports, corporate financial statements, as well as official publications available on the Indonesia Stock Exchange (IDX) website and the official website of PT Bukit Asam Tbk.

2. Literature Review

The literature review in this study was conducted by reviewing various literatures related to Financial Leverage, Operating Leverage, and Profitability, including books, academic journals, and relevant prior research.

DATA ANALYSIS TECHNIQUES

This study utilizes data analysis methods assisted by the computer program Statistical Package for Social Science (SPSS) Version 26. The data analysis techniques applied in this research are as follows:

1. Classical Assumption Test

The classical assumption test is conducted to determine whether the regression model used meets the basic assumptions of linear regression, thereby producing unbiased and accurate estimates. The classical assumption tests used include:

a. Normality Test

The normality test is used to examine whether the regression model has a normal distribution or not. The assumption of normality is a highly critical requirement in testing the significance of regression coefficients. In this study, the normality test applied is the Kolmogorov-Smirnov test by analyzing the residual data. If the significance value is > 0.05 , the data are considered normally distributed. Conversely, if the significance value is < 0.05 , the data are not considered normally distributed.

b. Multicollinearity Test

Multicollinearity is a condition where a perfect or near-perfect linear relationship occurs between independent variables in a regression model. According to Mardiatmoko (2020), "Symptoms of multicollinearity can be detected by looking at the Variance Inflation Factor (VIF) and Tolerance values. If the VIF value is < 10 and the Tolerance value is $> 0,1$, it is stated that multicollinearity does not occur."

c. Heteroscedasticity Test

1736



This test assesses whether there is an inequality of variance in the residuals for all observations in a linear regression model. The heteroscedasticity test can be conducted using a scatterplot; if there is no clear pattern and the points spread above and below the zero mark on the Y-axis, then heteroscedasticity does not occur.

d. Autocorrelation Test

The autocorrelation test aims to examine whether there is a correlation between the confounding error in period t and the confounding error in period $t-1$ (the previous period) within a linear regression model. Autocorrelation arises because successive observations over time are related to one another (Ghozali, 2019). The autocorrelation test used is the Durbin-Watson test (DW test). Whether or not autocorrelation occurs can be determined by the condition $dU < dW < 4 - dU$ (Ghozali, 2019).

Table 2. Decision Making for the Presence or Absence of Autocorrelation

Null Hypothesis	Decision	Condition
No positive autocorrelation	Reject	$0 < d < dl$
No positive autocorrelation	No decision	$dl \leq d \leq du$
No negative autocorrelation	Reject	$4 - du < d < 4$
No negative autocorrelation	No decision	$4 - du \leq d \leq 4 - dl$
No positive or negative autocorrelation	Do not reject	$du < d < 4 - du$

Source: Ghozali, (2019)

2. Multiple Linear Regression

Multiple linear regression is based on the functional or causal relationship between two or more independent variables and one dependent variable (Sugiyono, 2019). The equation is formulated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

Description:

Y	: Profitability (ROE)
α	: Constant
$\beta_1, 2$	: Regression Coefficients
X_1	: Financial leverage (DFL)
X_2	: Operating leverage (DOL)
e	: Error



3. Correlation and Determination Coefficients**a. Correlation Coefficient**

The correlation coefficient test aims to measure the strength of the relationship between two or more variables, based on the following criteria:

Table 3. Guidelines for Interpretation of Correlation Coefficient

Coefficient Interval	Relationship Level
0,00 – 0,199	Very Weak
0,20 – 0,399	Weak
0,40 – 0,599	Moderate
0,60 – 0,799	Strong
0,80 – 1,00	Very Strong

Source: Sugiyono, (2019)

b. Coefficient of Determination

According to Sugiyono (2019), the coefficient of determination test aims to evaluate the goodness-of-fit of the model by analyzing the coefficient of determination value. The value of the coefficient of determination ranges from 0 to 1 ($0 < R^2 < 1$).

4. Hypothesis Testing (t-Test)

The t-test is used to determine whether each independent variable (Gross Profit Margin, Debt-to-Equity Ratio, and Company Size) individually has an effect on the dependent variable (Profit Growth). The significance level is $\alpha = 0.05$. The criteria are as follows:

- If the calculated t-value is less than the table t-value, with a significance level of > 0.05 , then the independent variable does not have a significant effect on the dependent variable (the null hypothesis is rejected).
- If the calculated t-value is greater than the table t-value, with a significance level of < 0.05 , then the independent variable has a significant effect on the dependent variable (the null hypothesis is accepted).

5. Model Specification Test (F-Test)

The F-test is used to determine the significance of the combined effect of all independent variables on the dependent variable and/or to test whether the regression model we have constructed is significant or not (Sugiyono, 2016). According to Gujarati



as cited in Sutikno (2017), the criteria for accepting or rejecting H_0 based on the probability value are as follows:

- a. If the significance level is > 0.05 and the calculated f-value is $<$ the table f-value, then the hypothesis is rejected.
- b. If the significance level is < 0.05 and the calculated f-value is $>$ the table f-value, then the hypothesis is accepted.

RESEARCH RESULTS

Discussion Of Data Analysis Results

1. Classical Assumption Test

a. Normality Test

Table 4. One-Sample Kolmogorov-Smirnov Test Results

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			11
Normal	Mean		.0000000
Parametersa,b	Std.		7.98287920
	Deviation		
Most	Extreme	Absolute	.249
Differences		Positive	.249
		Negative	-.108
Test Statistic			.249
Asymp. Sig. (2-tailed)			.056c

a. Test distribution is Normal.

Data Source: Secondary Data Processed via SPSS, 2026

Based on the Kolmogorov-Smirnov test results above, the Asymp. Sig. value is $0.056 > 0.05$. This indicates that the data in this study are normally distributed, and the regression model is feasible for use.



b. Multicollinearity Test

Table 5. Multicollinearity Test Results

Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
DFL	.995	1.005
DOL	.995	1.005

a. Dependent Variable: ROE

Data Source: Secondary Data Processed via SPSS, 2026

Based on the Collinearity Statistic values from the table above, the Tolerance values for DFL (X1) and DOL (X2) are 0.995 and 0.995, respectively. Both tolerance values are greater than ($>$) 0.10. Meanwhile, the VIF values for the DFL (X1) and DOL variables are 1.005; these VIF values are less than ($<$) 10.00. Therefore, it can be concluded that there is no multicollinearity in the regression model.

c. Heteroscedasticity Test

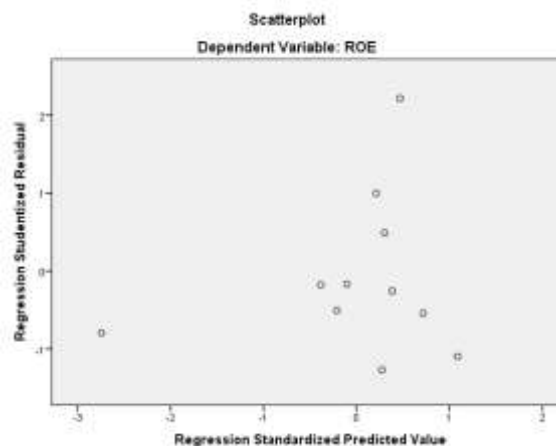


Figure 2. Results of the Heteroscedasticity Test

Data Source: Secondary data processed using SPSS 2026

Based on the scatterplot above, it can be seen that the data points do not form a specific pattern and tend to be scattered above and below the 0 mark on

the Y-axis. Therefore, it can be concluded that there is no evidence of heteroscedasticity in the regression model.

e. Autocorrelation Test

Table 6. Autocorrelation Test Results

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.426a	.181	-.024	8.925	1.272

Data Source: Secondary data analyzed using SPSS 2026

The results of the autocorrelation test above show a Durbin-Watson statistic of 1,272. For $n = 11$ and $k = 2$, where n is the sample size and k is the number of independent variables, the dU value is 1,604. Since $dU < d < 4 - dU$, it follows that $1,604 > 1,278 < 2,396$. Therefore, it is concluded that autocorrelation is present. For this reason, the Runs Test is used to test for autocorrelation.

Table 7. Results of the Runs Test

Runs Test

	Unstandardized Residual
Test Value ^a	-1.33762
Cases < Test Value	5
Cases >= Test Value	6
Total Cases	11
Number of Runs	7
Z	.029
Asymp. Sig. (2-tailed)	.977

a. Median

Data Source: Secondary data analyzed using SPSS 2026

Based on the results of the Runs Test above, it can be seen that the Asymp. Sig. (2-tailed) value is $> 0,05$, specifically 0,977. This value indicates that the data used in this study does not exhibit autocorrelation.



2. Multiple Linear Regression

Table 8. Results of the Multiple Linear Regression Test

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	23.338	4.044		5.771	.000
DFL	.020	.038	.168	.523	.615
DOL	-.001	.001	-.403	-1.256	.245

a. Dependent Variable: ROE

Data Source: Secondary data analyzed using SPSS 2026

From the results of the regression analysis, the multiple regression equation is as follows:

$$Y = 23,338 + 0,020 X_1 - 0,001 + e$$

Based on this equation, the following can be explained:

- The constant term of 23,338 means that if the variables Degree of Financial Leverage (DFL) and Degree of Operating Leverage (DOL) are set to zero, the value of Return on Equity (ROE) will increase by 23,338.
- The beta coefficient for the Degree of Financial Leverage (DFL) variable is 0,020, meaning that a one-unit change in the DFL variable (X_1) will result in a change in the firm's value of 0,020, assuming all other variables remain constant.
- The beta coefficient for the Degree of Operating Leverage (DOL) is -0,001, meaning that a one-unit change in the DOL variable (X_2) will result in a change in the company's value of -0,001, assuming all other variables remain constant.

3. Correlation and Determination Coefficients

a. Correlation Coefficient

Based on the data processing results in Table 6, the correlation coefficient value is 0,426. This result explains that there is a relationship between the Degree of Financial Leverage (DFL) and the Degree of Operating Leverage (DOL) toward Return On Equity (ROE). This value falls within the 0,40 – 0,599 interval, indicating a moderate level of correlation.

b. Coefficient of Determination

1742



As shown in Table 6 above, there is an effect of the Degree of Financial Leverage (DFL) and the Degree of Operating Leverage (DOL) on Return On Equity (ROE). The magnitude of this effect can be quantified through the coefficient of determination test, which yielded an R-Square (Coefficient of Determination) value of 0,181 or 18,1%. Meanwhile, the remaining 81,9% is influenced by other factors not examined in this study.

4. Hypothesis Testing (t-Test)

1. The Effect of the Degree of Financial Leverage (DFL) on Return On Equity (ROE)

Based on Table 8 above, the significance value of the DFL variable is 0,615, which is greater than the significance level of 0,05 ($0,615 > 0,05$). The calculated t-value is 0,523, while the t-table value is 1,859 ($0,523 < 1,859$). Therefore, the first hypothesis stating that "Financial leverage has a partially significant effect on the profitability of PT Bukit Asam Tbk" is rejected (H_1 is rejected). This occurs because fluctuations in fixed financial expenses from debt usage lack the strong sensitivity required to influence the company's net profit generation. The profitability performance of PT Bukit Asam Tbk is substantially dominated by operational factors, such as production volume and global coal commodity price dynamics, alongside being supported by solid internal cash flow fundamentals. Consequently, financial leverage policies do not provide a partially significant contribution.

The results of this study are in line with research conducted by Putra & Kadang (2020), which states that financial leverage does not have a partially significant effect on profitability.

2. The Effect of the Degree of Operating Leverage (DOL) on Return On Equity (ROE)

Based on Table 8 above, the significance value of the DOL variable is 0,245, which is greater than the significance level of 0,05 ($0,245 > 0,05$). The calculated t-value is -1,256, while the t-table value is 1,859 ($-1,256 < 1,859$). Therefore, the second hypothesis stating that "Operating leverage has a partial effect on the profitability of PT Bukit Asam Tbk" is rejected (H_2 is rejected). This is because PT Bukit Asam Tbk is a coal mining company whose profitability is driven heavily by international market coal prices rather than the company's internal operating cost structure. When coal prices are high, the company will generate substantial profits despite having a low degree of operating leverage, and vice versa. Thus, the



magnitude of the DOL value does not directly reflect the level of profitability achieved by the company during that period.

The results of this study are in line with research conducted by Arijal et al. (2025), which states that operating leverage does not have a partially significant effect on profitability.

5. Model Fit Test (F-Test)

Table 9. Results of the F-Test

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	140.918	2	70.459	.885	.450b
Residual	637.264	8	79.658		
Total	778.182	10			

a. Dependent Variable: ROE

b. Predictors: (Constant), DOL, DFL

Data Source: Secondary data analyzed using SPSS 2026

3 The Effect of the Degree of Financial Leverage (DFL) and the Degree of Operating Leverage (DOL) on Return on Equity (ROE)

The test results yielded a calculated F-value of 0,885, compared to a critical F-value of 4,46 ($0,885 < 4,46$), with a p-value of 0,450 ($0,450 > 0,05$). Since the significance level is greater than 0,05 ($0,450 > 0,05$), it can be concluded that the third hypothesis, which states that "Financial leverage and operating leverage simultaneously have a significant effect on the profitability of PT Bukit Asam Tbk," is rejected (H3 is rejected). This is because, taken together, the DFL and DOL variables are unable to significantly explain changes in profitability at PT Bukit Asam Tbk. This indicates that the company's profitability is more influenced by other factors beyond these two variables. Thus, although financial leverage and operating leverage are theoretically related to profitability, in the context of PT Bukit Asam Tbk, neither is strong enough to simultaneously explain changes in the company's profitability.

RESEARCH CONCLUSIONS

Conclusions

The conclusions of this study are as follows:

1744

IJEBIR, Volume 05 Issue 04, 2026



Copyright at authors some right reserved this work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

1. Financial leverage does not have a significant partial effect on the profitability of PT Bukit Asam Tbk.
2. Operating leverage does not have a significant partial effect on the profitability of PT Bukit Asam Tbk.
3. Financial leverage and operating leverage do not have a significant simultaneous effect on the profitability of PT Bukit Asam Tbk.

Recommendations

Based on the research conducted, the researcher offers the following recommendations:

1. The researcher recommends that PT. Bukit Asam Tbk pay closer attention to external factors, such as coal price movements in the international market, when making financial decisions, and continue to optimize operational cost efficiency so that the company's profitability can be maintained even when market conditions are unfavorable.
2. Investors planning to invest in PT Bukit Asam Tbk stock are advised not only to consider the levels of financial leverage and operating leverage when assessing the company's profitability but also to pay attention to global coal prices and government policies related to the energy sector, which have a more significant influence on the company's financial performance.
3. The researchers also suggest adding other more relevant independent variables, such as coal prices, sales volume, or macroeconomic factors like exchange rates and inflation, which are believed to have a greater impact on the profitability of mining companies.

REFERENCES

- angelita, N., & Ali, H. (2024). Pengaruh Persaingan Global , Perubahan Preferensi Konsumen Dan Opini Publik Terhadap Ancaman Perusahaan. 2(2), 85–96.
- Arijal, Huda, N., & Nurhayati. (2025). Analisis Pengaruh Financial Leverage , Operating Leverage , Combination Leverage , Dan Total Assets Turnover Terhadap Profitabilitas Pada Pt Pertamina. Jurnal Revenue, 6.
- Barita, G. A., & Ekadjaja, A. (2025). Barita Dan Ekadjaja: Pengaruh Profitability, Liquidity, Ukuran Perusahaan Dan... Jurnal Multiparadigma Akuntansi, Vii(1), 170–178.
- Erniza, S. N., Anggraini, T., Luhur, U. B., Luhur, U. B., & Erniza, S. N. (2025). Pengaruh Leverage , Ukuran Perusahaan , Pertumbuhan Penjualan , Dan Kapasitas Operasi

1745

IJEBIR, Volume 05 Issue 04, 2026



Copyright at authors some right reserved this work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

- Terhadap Financial Distress (Studi Empiris Sub Sektor Ritel Yang Terdaftar Di Bursa Efek Indonesia Periode 2020-2024). 2(4), 120–127.
- Firmansyah, A. (2019). Pengaruh Return On Equity Dan Earning Per Share Terhadap Harga Saham Pada Sektor Komponen Dan Otomotif Yang Terdaftar Di Bursa Efek Indonesia. Biej: Business Innovation & Entrepreneurship Journal, 1(3), 141–148.
- Hamid, A., Kusrina, B. L., & Wardoyo. (2015). Benefit Jurnal Manajemen Dan Bisnis Pengaruh Financial Leverage Terhadap Return On Equity (Roe) Dan Earning Per Share (Eps) Pada Sektor Industri Dasar Dan Kimia Yang Terdaftar Di Bursa Efek Indonesia . Universitas Gunadarma Universitas Gunadarma Abstr. Benefit Jurnal Manajemen Dan Bisnis, 19, 53–63.
- Hidayat, M., & Galib, M. (2019). Analisis Leverage Operasi Dan Leverage Keuangan Terhadap Earning Per Share (Eps) Di Perusahaan Industri Pabrik Kertas Yang Terdaftar Di Bursa Efek Indonesia. 2(1), 33–42.
- Jannah, E., & Cahyono, K. E. (2020). Pengaruh Stuktur Modal , Ukuran Perusahaan , Dan Likuiditas (Studi Pada Perusahaan Makanan Dan Minuman Yang Terdaftar Di Bursa Efek Indonesia). Jurnal Ilmu Dan Riset Manajemen.
- Kasmir. (2019). Pengantar Manajemen Keuangan. Kencana.
- Kasmir, K. (2020). Analisis Laporan Keuangan. Raja Grafindo Persada.
- Kumalasari, R., & Widyawati, N. (2016). Pengaruh Operating Leverage Dan Financial Leverage Terhadap Profitabilitas Pada Perusahaan Telekomunikasi. Jurnal Ilmu Dan Riset Manajemen, 5.
- Manggale, N., & Widyawati, D. (2010). Pengaruh Return On Equity , Leverage , Ukuran Perusahaan ,.
- Persada, S., & Ariyani, V. (2019). Pengaruh Operating Leverage Dan Financial Leverage Terhadap Profitabilitas Pada Perusahaan Yang Tergabung Dalam Indeks. 07(01), 56–68.
- Puspitasari, N. M. D., Warmana, G. O., & Astiti, N. P. Y. A. (2020). Pengaruh Degree Of Financial Leverage Dan Degree Of Operating Leverage Terhadap Profitabilitas. Jurnal Widya Manajemen, 2(1), 28–35.
- Putra, R., & Kadang, J. (2020). Pengaruh Operating Leverage Dan Financial. 6(2), 96–102.
- Rahmawati, Ngampo, M. . Y. A., & Dinakhir, S. (2023). Pengaruh Financial Leverage Terhadap Profitabilitas Pada Perusahaan Sub Sektor Telekomunikasi Yang Terdaftar Di Bursa Efek Indonesia. Jurusan Pendidikan Akuntansi, Universitas Negeri Makassar, 3(4), 17–23.



- Setiawati, L. W., & Lim, M. (2015). Analisis Pengaruh Profitabilitas, Ukuran Perusahaan, Leverage, Dan Pengungkapan Sosial Terhadap Nilai Perusahaan Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Periode 2011--2015. *Jurnal Akuntansi*, 12(1), 29–57.
- Sugiyono, P. D. (2019). Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R&D Dan Penelitian Pendidikan). *Metode Penelitian Pendidikan*, 67, 18.
- Widiyanti, M., & Elfina, F. D. (2015). Pengaruh Financial Leverage Terhadap Profitabilitas Pada Perusahaan Sub Sektor Otomotif Dan Komponen Yang Terdaftar Di Bursa Efek Indonesia. *Jurnal Manajemen Dan Bisnis Sriwijaya*, 13(1), 117–136

