

**MEDIATION OF COMPANY SIZE IN THE INFLUENCE OF PROFITABILITY
AND LEVERAGE ON COMPANY VALUE (EMPIRICAL STUDY ON
MANUFACTURING COMPANIES IN THE BASIC INDUSTRIAL AND
CHEMICAL SECTORS, 2020-2022)**



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Abstract

This research aims to understand whether company size mediates the effect of profitability and leverage on company value in manufacturing companies in the basic industrial and chemical sectors during the 2020-2022 period. This type of research uses quantitative research using secondary data recorded systematically in the form of a time series, namely from 2020-2022 obtained from the official IDX website (www.idx.co.id) with associative cause and effect as a form of research. Based on the test results using the T Test, it was found that Return on Equity (ROE), Debt to Equity Ratio (DER), and Company Size had a significant effect on company value with significance values of 0.0043, 0.0000 respectively, and 0.00005. This shows that Hypotheses 1, 2, and 3 can be accepted. However, the influence of ROE and DER on company size does not have a significant effect on company value with significance values of 0.4481 and 0.8949 respectively, so Hypotheses 4 and 5 are rejected. Based on the test results using the Sobel Test, it was found that company size was unable to mediate the influence of ROE and DER on company value with p-values of 0.64 and 0.45 respectively, indicating that Hypotheses 6 and 7 were rejected.

Keywords: Mediation of Company Size, Profitability and Leverage, Company Value

INTRODUCTION

The majority of companies closely strive to be consistent and against all odds and can maintain competition with other companies (Zahiroh et al, 2023). Maintaining financial stability while continuously increasing company value is reflected in a good company. A company's ability to maintain business continuity is influenced by the financial condition of the company concerned (Syaharman 2021; Munawaroh et al, 2023). At the same time, whether the company's performance is good or not can be seen from the company's financial reports that have been prepared. When the financial prospects are considered unfavorable, it has the impact of giving a negative signal to investors, causing a decrease in interest in investing capital and resulting in a weak share price for the company (Tuharea & Fatimah, 2023).

In 2023, the 2023 Composite Stock Price Index (IHSG) weakened by 0.89% on Wednesday 13 December 2023 to 7,062.10. The impact of the decline was spread across the basic industry and chemical groups, which experienced a decline of 1.08 percent. Of the 41 profitable basic industrial and chemical manufacturing issuers, only 19 companies were included in the green zone in the stock exchange survey, while in the red zone, there were a total of 22 basic industrial and chemical manufacturing companies. The value of national manufacturing industrial companies began to experience a significant decline in March 2020, which was marked by a weakening of the Manufacturing PMI (Purchasing Managers' Index) figure in the manufacturing sector from a level of 51.9 in February 2020 to 45.3 in March 2020 and a plunge free to the lowest level to 27.5 in April 2020 (Kusumah Alum, 2020). The manufacturing industry made the largest contribution to the increase in Indonesia's economic growth, which reached 7.07% in the second quarter of 2021. This sector was the source of the highest growth, namely 1.35%. In this period, the manufacturing sector itself recorded growth of 6.91% despite experiencing pressure due to the COVID-19 pandemic (Ministry of the Republic of Indonesia, 2021). Throughout 2022, the manufacturing industrial sector in the country is consistently at an expansive level, which is reflected in the achievement of the Indonesian Manufacturing Purchasing Managers' Index (PMI) at a position above 50 points. In December 2022, the Indonesian Manufacturing PMI closed at 50.9 or managed to increase compared to the previous month's achievement which touched 50.3 (Ministry of the Republic

of Indonesia, 2023). The higher the JCI price is in line with the company's value. Profitability, leverage, and company size are indicators that influence corporate value.

Taking into consideration the phenomena previously explained, as well as previous studies that have inconsistent results, according to researchers, research related to company value is still suitable to be studied with a different unit of analysis from previous researchers, namely Manufacturing Companies in various industrial sectors. It is also hoped that this research will be useful for investors as a consideration in making investment decisions.

REVIEW OF LITERATURE

The Effect of Return on Equity on Company Value

The aspect that influences corporate value is profitability. The use of metrics used by a company to reflect its financial performance must be optimal. In carrying out its operational activities, profitable conditions must be achieved by the corporation. Without profits, it will be difficult for companies to obtain and attract capital from outside parties. In accordance with the concept of Signaling Theory, profitability will be a signal from management that describes the company's prospects based on the level of profitability that is formed and will directly influence the value of the company which is reflected in the level of share prices on the market. Companies that have a high level of profitability will be interested in their shares by investors, thereby increasing the value of the company. The influence of the Return on Equity variable on company value shows positive results, this indicates that the level of return on equity and company value is in one direction, meaning that when the return is maximum, the value of the company is getting better. Vice versa, a decrease in ROE will be followed by a decrease in company value (Ali, Faroji, and Ali 2021). However, this is contrary to research (Bagaskara, Titisari, and Dewi 2021) which shows that ROE has no impact on corporate value, the reason is that if profitability in this study is measured using ROE when viewed from the capital side, it will not be attractive to investors. Because if the profits obtained by the company are high and the capital is also high, the return profit obtained by investors will only be small. If related to signal theory, then this can give a bad signal to investors because it will make investors reluctant to invest their shares in the company.

H₁: Return on Equity has a significant effect on Company Value

The Influence of Debt to Equity Ratio on Company Value

Financial leverage is optimizing a company's debt to carry out its activities to maximize profits. Leverage is a tool to measure how much credit a company has in financing company assets (Bagaskara et al. 2021). If the use of debt is stable, it will accelerate the company's development. Outside parties consider the influence of debt on the company's total assets to be important. The company can use equity as a source of funds rather than using debt, so that it influences the value of the company which will be considered that leverage has a level of profit. Research (Santi and Sudarsi 2024) states that leverage has a positive effect on corporate value, because the higher the leverage, the more it is in line with corporate value. However, this research is not in line with the research conducted by (Bagaskara et al. 2021), and research results by (Tony Sudirgo 2021) which shows that leverage in this case measured using DER does not affect company value. Because investors invest capital hoping to get a return, so in this case the investor only looks at the return obtained without looking at the size of the debt.

H₂: Debt to Equity Ratio has a significant effect on Company Value

The Effect of Company Size on Company Value

The size of a company which can be measured using the logarithm of total assets is the definition of company size. The size of the entity based on total assets tends to encourage companies to earn high profits so that investor returns are greater (Nahdhiyah and Alliyah 2023). Large-scale entities usually have complete resources compared to small-scale entities. In line with the size of the entity, the company's ability to earn high profits will optimize stock returns to achieve investors' expectations. This is supported by previous research conducted by (Tony Sudirgo 2021), which shows that company size has a positive and significant effect on corporate value. However, this is contrary to research (Yulianti, Hermuningsih, and Sari 2022) which results in the fact that company size has an insignificant negative influence on corporate value due to the perception that companies that have too large total assets can provide a negative signal to investors and potential investors. If the company has large total assets, management has the freedom to be in harmony with the company's asset owners.

H₃: Company size has a significant effect on company value

The Effect of Return on Equity on Company Size

The size of a company influences the company's development. So it can attract the attention of people who will trust the company. If the company develops well, profits will also move in line with this development. This shows that if the company has high profits, then the entity is large scale and the total assets owned are also large. Investors hope that the total assets owned will produce high profits so that the returns expected by investors can be achieved.

H₄: Return on Equity has a significant effect on Company Size

The Influence of Debt to Equity Ratio on Company Size

Leverage in this research is measured using DER, to the company's operational continuity, namely financial decisions with the composition of debt and equity that the company must use. Large-scale companies have access to funding from various sources, so getting loans from creditors will be more important and determine their bargaining power in financial contracts. Entities with large scale can easily access the capital market. Ease of access means companies have the flexibility and ability to raise larger funds.

H₅: Debt to Equity Ratio has a significant effect on Company Size

The Effect of Return on Equity on Company Value through Company Size as a Mediating Variable

Company size is a good benchmark for the quality of an entity because large assets must have a high market price. If the entity is large-scale, it will be easier to raise funds and the profits earned will also be high. So, company size is expected to have a positive impact on ROE on company value (Risqi and Suyanto 2022). Signal theory is an action taken by company management that can provide a signal to investors about how management views the company's performance. The larger the size of the company that shows good performance, the more positive signals it will give to investors, thereby increasing the value of the company.

H₆: Company size can mediate Return on Equity on Company Value

The Influence of Debt to Equity Ratio on Company Value through Company Size as a Mediating Variable

One of the factors that influences company value, such as DER, is seen from optimizing a company's debt to carry out company operations to gain profits. If debt is used optimally, the profits obtained are in line with this. The convenience obtained by large-scale entities is very influential in raising large funds. So company size is expected to have a positive impact on DER on company value.

H₇: Company size can mediate the Debt to Equity Ratio on Company Value

RESEARCH METHOD

Population and Sample

This type of research uses quantitative research using secondary data recorded systematically in the form of a time series, namely from 2020-2022 obtained from the official IDX website (www.idx.co.id) with associative cause and effect as a form of research. The main population of this research is manufacturing companies in the basic industrial and chemical sectors listed on the Indonesia Stock Exchange. Sampling uses purposive sampling which is based on the following criteria:

- a. Manufacturing companies in the basic industrial and chemical sectors that publish complete financial reports for the 2020-2022 period
- b. Manufacturing companies in the basic industrial and chemical sectors with registered share prices for the 2020-2022 period
- c. Consistently generate profits for the 2020-2022 period

The sample used in this research was 108 companies.

Variable Measurement

The variables in this study were measured using the formula in table 1 as follows:

Table 1.
Variable Measurement

Variable	Variable Concept	Indicator	Scale
Profitability (X_1)	The profitability ratio is the ability of a company to earn profits in a certain period.	ROE = $\frac{\text{Profit after interest and tax}}{\text{Equity}}$	Ratio
Leverage(X_2)	Leverage is a ratio used to measure the extent to which company assets are financed with debt.	DER = $\frac{\text{Total Debt}}{\text{Total Equity}} \times 100\%$	Ratio
Company Size (Z)	Company size describes the size of an issuer.	Company Size = LnTotal Aset	Ratio
Corporate Value (Y)	Price to book value is a comparison between the share price and the company's book value	PBV = $\frac{\text{Stock price}}{\text{Book value per share}}$	Ratio

Source: Previous Research Journal

Data Analysis Method

Eviews 12.0 was used to analyze the data in this research with a data analysis technique, namely panel data regression, the best model that can be used in this research is the Random Effect Model. Panel data is data that has the characteristics of a cross section and a time series simultaneously. This research using panel data regression is used to see the influence of the independent variables on the dependent variable. The regression model equation in this research is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

RESULTS AND DISCUSSION

Descriptive Statistics

Data analysis uses descriptive analysis which is intended and used to determine the average value, maximum value, minimum value, and standard deviation of each variable in this research. The results of descriptive statistical tests are presented as follows:

Table 2.
Descriptive Statistical Test Results

	X1__ROE_	X2__DER_	Y__COMPANY_SIZE_	Z__PBV_
Mean	0.121498	0.797698	25.29811	2.755741
Median	0.081487	0.535756	25.58360	0.940000
Maximum	0.640292	8.766166	29.87680	122.4500
Minimum	0.000172	0.000000	19.85250	0.040000
Std. Dev.	0.118354	1.185428	2.795692	11.77877
Observations	108	108	108	108

Source: Data results processed with Eviews Version 12

Based on the results of descriptive statistical tests, it shows that Return on Equity has the lowest (minimum) value of 0.000172, the highest (maximum) value of 0.640292, the average (mean) value of 0.121498, and the standard deviation of 0.118354. Debt to Equity Ratio has the lowest (minimum) value of 0.000000, the highest (maximum) value of 8.766166, the average (mean) value of 0.797698, and the standard deviation of 1.185428. Company size has the lowest (minimum) value of 19.85250, the highest (maximum) value of 29.87680, the average (mean) value of 25.29811, and the standard deviation of 2.795692. The company value has the lowest (minimum) value of 0.040000, the highest (maximum) value of 122.4500, the average (mean) value of 2.755741, and the standard deviation of 11.77877.

Panel Data Regression Model Test

There are three tests for selecting panel data estimation techniques. First, the Chow test is used to choose between the Common Effect Model or Fixed Effect Model. Second, the Hausman test is used to choose between the Fixed Effect Model method or the Random Effect Model method. Third, the LM test is used to choose between the Common Effect

Model or Random Effect Model methods. The results of the panel data regression model show that the model used is the Random Effect Model.

Based on the results of the Random Effect Model regression model in Table 3, the panel data regression equation is obtained as follows:

$$Y = 17.76254 + 5.283888ROE - 0.951924DER - 0.588559FM + e$$

Table 3.
Random Effect Model Results

Variables	Coefficient	Std. Error	t-Statistics	Prob.
ROE	5.283888	10.71075	0.493326	0.0043
DER	-0.951924	1.102468	-0.863448	0.0000
FM	-0.588559	0.450264	-1.307143	0.0005
C	17.76254	11.48587	1.546468	0.1250
MSE Root	11.61551	R-squared		0.018440
Mean dependent var	2.755741	Adjusted R-squared		0.549074
SD dependent var	11.77877	SE of regression		11.83678
Sum squared resid	14571.37	F-statistic		0.651280
Durbin-Watson stat	1.532246	Prob (F-statistic)		0.000003

Source: Eviews Version 12 Output

Based on the results of tests carried out by researchers using panel data regression analysis techniques, the best model that can be used in this research is the Random Effect Model.

T-Test

Based on the t-test results in Table 3, the influence of ROE, DER, and Company Size on Company Value can be explained as follows:

- a. Return on Equity based on the test results in Table 3, it can be seen that profitability (ROE) has a significance value of $0.0043 < 0.05$. These results indicate that ROE does not have a significant influence. So the first hypothesis can be accepted. (H_1)

- b. Based on the test results in Table 3, it can be seen that leverage (DER) has a significance value of $0.0000 < 0.05$. These results indicate that DER has a significant influence. So the second hypothesis can be accepted. (H_2)
- c. Based on the test results in Table 3, it can be seen that the company size has a significance value of $0.0005 < 0.05$. These results indicate that company size has a significant influence. So the third hypothesis can be accepted. These results conclude that company size influences company value. (H_3)

F Test (Model Feasibility)

The results of the F test show that simultaneously Profitability (ROE), Leverage (DER), and Company Size influence Company Value in 36 manufacturing companies in the basic industrial and chemical sectors. Based on the test results in Table 3 above, it shows that the F-Statistic probability value is 0.000003. So the F-Statistic probability value is $0.000003 < 0.05$. This means it can be concluded that this research model is suitable for use.

Sobel Test

a. DER on Company Value through Company Size

	Input:	Test statistic:	Std. Error:	p-value:
a	-0.951924	Sobel test: -0.75389815	22.42821281	0.45091038
b	17.76254	Aroian test: -0.65649133	25.75599616	0.51150804
s _a	1.102468	Goodman test: -0.91340662	18.51156724	0.36102873
s _b	11.48587	Reset all	Calculate	

b. ROE to Company Value through Company Size

	Input:	Test statistic:	Std. Error:	p-value:
a	5.283888	Sobel test: 0.46999133	199.69574965	0.63836121
b	17.76254	Aroian test: 0.40015339	234.54823453	0.68904354
s _a	10.71075	Goodman test: 0.59665668	157.30197244	0.55073662
s _b	11.48587	Reset all	Calculate	

Coefficient of Determination Test

Coefficient of determination test (R^2) used to determine the size of the independent variable in explaining the dependent variable. The independent variables were able to explain the dependent variable by 54.90%, while the remaining 45.10% was influenced by other variables not explained in this research. The ability of the independent variables to explain

the dependent variable simultaneously can be said to be at the level of a strong relationship and this research model is good.

Meanwhile, the influence of the independent variables on the dependent variable will be partially explained as follows:

1. The Effect of Return on Equity on Company Value

Return on Equity based on the test results in Table 3, it can be seen that profitability (ROE) has a significance value of $0.0043 < 0.05$. These results indicate that ROE does not have a significant influence. So the first hypothesis can be accepted. (H_1)

This is because if a company has a high level of profitability, it shows the credibility of the company's good performance and the company's promising condition in the future. A company with high profitability will generate maximum profits so that it will attract greater investor attention to the company. The high interest of investors to invest capital will increase company value.

The results of this research are supported by the results of previous research which concluded that profitability has a significant effect on company value (Saputra, Umi Nadhiroh, and Heru Sutapa 2022); Ali et al., 2021).

2. The Influence of Debt to Equity Ratio on Company Value

Based on the test results in Table 3, it can be seen that leverage (DER) has a significance value of $0.0000 < 0.05$. These results indicate that DER has a significant influence. So the second hypothesis can be accepted. (H_2)

If the use of debt is stable, it will accelerate the company's development. Outside parties consider the influence of debt on the company's total assets to be important. The company can use equity as a source of funds rather than using debt, so that it influences the value of the company which will be considered that leverage has a level of profit.

The results of this research are supported by the results of previous research which concluded that DER has a significant effect on company value (Santi and Sudarsi 2024).

3. The Effect of Company Size on Company Value

Based on the test results in Table 3, it can be seen that the company size has a significance value of $0.0005 < 0.05$. These results indicate that company size has a

significant influence. So the third hypothesis can be accepted. These results conclude that company size influences company value. (**H₃**)

In line with the size of the entity, the company's ability to earn high profits will optimize stock returns to achieve what investors expect. This is supported by previous research conducted by (Tony Sudirgo 2021), which shows that company size has a positive and significant effect on corporate value.

4. The Effect of Return on Equity on Company Size

Based on the test results, it can be seen that ROE has a significance value of 0.4481 > 0.05. These results indicate that company size does not have a significant influence. So, the fourth hypothesis is rejected. These results conclude that ROE does not affect company size (**H₄**).

5. The Influence of Debt to Equity Ratio on Company Size

Based on the test results, it can be seen that DER has a significance value of 0.8949 > 0.05. These results indicate that company size does not have a significant influence. So the fifth hypothesis is rejected. These results conclude that DER does not affect company size. (**H₅**)

6. The Effect of Return on Equity on Company Value through Company Size

Based on the test results using the Sobel test, it shows that company size is unable to mediate the influence of ROE on company value, with a p-value of 0.64 > 0.05. So the sixth hypothesis is rejected. (**H₆**)

7. The Influence of Debt to Equity Ratio on Company Value through Company Size

Based on the test results using the Sobel test, it shows that company size is unable to mediate the influence of DER on company value, with a p-value of 0.45 > 0.05. So the seventh hypothesis is rejected. (**H₇**)

CONCLUSION

Based on the test results using the T-Test, it was found that Return on Equity, Debt to debt-to-equity ratio, and Company Size had a significant effect on company value with

significance values of 0.0043, 0.0000, and 0.00005 respectively. This shows that Hypotheses 1,2, and 3 can be accepted.

The influence of ROE and DER on company size does not have a significant effect on company value with significance values of 0.4481 and 0.8949 respectively. So hypotheses 4 and 5 are rejected.

Based on the test results using the Sobel Test, it was found that Company Size was unable to mediate the influence of ROE and DER on Company Value with p-values of 0.64 and 0.45 respectively. This shows that Hypotheses 6 and 7 are rejected.

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