



DOI: <https://doi.org/10.38035/snefr.v2i2>
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Profitability, Leverage, and Firm Value: The Moderating Role of Firm Size in Indonesian Property and Real Estate Companies

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Abstract: This study aims to analyze the influence of profitability and leverage on firm value with firm size as a moderation variable in property and real estate sector companies listed on the Indonesia Stock Exchange for the period 2021–2025. The firm's value is proxied by Price to Book Value (PBV), profitability with Return on Assets (ROA), leverage with Debt to Equity Ratio (DER), while firm size is measured using Ln (Total Assets). This study uses a quantitative approach with secondary data in the form of firm financial statements obtained from the Indonesia Stock Exchange. The sampling technique used purposive sampling and produced 54 companies with 270 observations. Data analysis was carried out using panel data regression and Moderated Regression Analysis (MRA) with the help of EViews 13. The results showed that profitability (ROA) had no significant effect on firm value (PBV), while leverage (DER) had a significant effect on firm value. The size of the firm also does not have a significant effect on the value of the firm. In addition, the size of the firm is not able to moderate the influence of profitability or leverage on the firm's value. These findings show that the value of companies in the property and real estate sectors is more related to the management of debt structures than the ability to generate profits and the size of the firm's assets during the study period.

Keyword: Profitability, Leverage, Firm Size, Firm Value, Property and Real Estate.

Indonesian Abstract: Penelitian ini bertujuan untuk menganalisis pengaruh profitabilitas dan leverage terhadap nilai perusahaan dengan ukuran perusahaan sebagai variabel moderasi pada perusahaan sektor property and real estate yang terdaftar di Bursa Efek Indonesia periode 2021–2025. Nilai perusahaan diproksikan dengan Price to Book Value (PBV), profitabilitas dengan Return on Assets (ROA), leverage dengan Debt to Equity Ratio (DER), sedangkan ukuran perusahaan diukur menggunakan Ln (Total Aset). Penelitian ini menggunakan pendekatan kuantitatif dengan data sekunder berupa laporan keuangan perusahaan yang diperoleh dari Bursa Efek Indonesia. Teknik pengambilan sampel menggunakan purposive sampling dan menghasilkan 54 perusahaan dengan 270 observasi. Analisis data dilakukan menggunakan regresi data panel dan Moderated Regression Analysis (MRA) dengan bantuan EViews 13. Hasil penelitian menunjukkan bahwa profitabilitas (ROA)

tidak berpengaruh signifikan terhadap nilai perusahaan (PBV), sedangkan leverage (DER) berpengaruh signifikan terhadap nilai perusahaan. Ukuran perusahaan juga tidak berpengaruh signifikan terhadap nilai perusahaan. Selain itu, ukuran perusahaan tidak mampu memoderasi pengaruh profitabilitas maupun leverage terhadap nilai perusahaan. Temuan ini menunjukkan bahwa nilai perusahaan pada sektor property and real estate lebih berkaitan dengan pengelolaan struktur utang dibandingkan kemampuan menghasilkan laba dan besarnya aset perusahaan selama periode penelitian.

Kata Kunci: Profitabilitas, Leverage, Ukuran Perusahaan, Nilai Perusahaan, Properti dan Real Estat.

INTRODUCTION

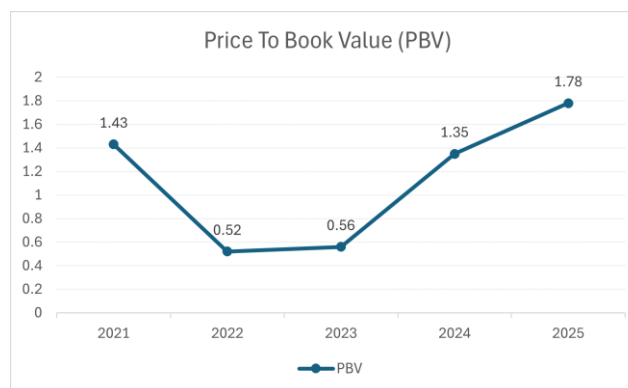
The property and real estate sector is a strategic business sector in the Indonesian capital market because it plays a role in providing housing, offices, shopping centers, and commercial facilities for the community. The increasing number of companies listed on the Indonesia Stock Exchange (IDX) shows that the model market is growing, both as a means of investment and a source of funding for companies (Salsabilah et al., 2025). The sustainable increase in asset value and relatively measurable risks make property one of the investment instruments that are in demand by the public.

Stock prices reflect investors' perceptions of a firm's performance and prospects so that its movements can be used as an initial indicator of the firm's value. Indonesia Stock Exchange data shows that the average stock price and Price to Book Value (PBV) of property and real estate companies fluctuated throughout 2021-2025, as presented in Figure 1 and Figure 2.



Source: www.idx.co.id, 2026 processed by author.

Figure 1. Average Share Price of Property and Real Estate Companies Listed on the Indonesia Stock Exchange in 2021-2025



Source : www.idx.co.id, 2026 processed by author.

Figure 2. Average Price to Book Value (PBV) of Property and Real Estate Companies Listed on the Indonesia Stock Exchange in 2021-2025

The average share price had declined sharply in 2023, before recovering to reach a high point in 2025, with a similar pattern seen in the PBV which had been below 1 (undervalued condition) in 2022-2023 before increasing again. This unstable movement pattern indicates that the firm's value in this sector is influenced by various factors, including the firm's internal financial performance.

A firm's value reflects the market's perception of the firm's future performance and prospects, which is reflected through its stock price (Gitman & Zutter, 2015). The higher the value of the firm, the greater the investor confidence so that the firm is considered able to meet the welfare of its shareholders (Sari et al., 2025). One of the factors that is suspected to affect a firm's value is profitability, which is the firm's ability to generate profits from the assets it owns and is generally measured by *Return on Assets* (ROA) (Gitman & Zutter, 2015). Another factor is *leverage*, namely the use of debt as a source of funding which is measured using the *Debt to Equity Ratio* (DER), optimal use of debt can increase the value of the firm through *tax shield* benefits, but excessive use can increase financial risks (Putri Nur Fitri & Haryati, 2022). In addition, the size of the firm as reflected in total assets is suspected to play a role, either directly or as a factor that strengthens or weakens the influence of profitability and *leverage* on the firm's value.

Previous research has shown inconsistent results regarding the relationship between these variables. Hidayatul Aziz & Widati (2023) and Wardani & Tjahjono (2025) found that profitability has a positive effect on firm value, but a number of other studies report an insignificant effect. In the leverage variable, Atmadja et al. (2024) found a significant influence on the value of the firm, while Carolin & Susilawati (2024) found that leverage had no positive effect. Regarding the role of firm size moderation, Susanti et al. (2025) found that firm size is able to strengthen the influence of profitability on firm value. Meanwhile, Septiana & Zulkifli (2024) and Atmadja et al. (2024) found that firm size is not able to moderate the influence of profitability or leverage on firm value. These results show that there is a research gap that underlies the importance of further testing, especially for companies in the property and real estate sector on the Indonesia Stock Exchange.

Based on this description, this study aims to analyze the influence of profitability and leverage on firm value with firm size as a moderation variable in property and real estate companies listed on the Indonesia Stock Exchange for the 2021-2025 period. This study is based on the *Signalling Theory*, which emphasizes that signals of success or failure of management are conveyed to the *owner*. The information published by the firm as an announcement is intended to share signals for investors in making investment decisions (Kusumaningrum & Iswara, 2022). Departing from the previous research, five research hypotheses were formulated as follows:

H1: The Effect of Profitability on Firm Value.

H2: The Effect of Leverage on Firm Value.

H3: The Effect of Size on Firm Value.

H4: The Role of Firm Size in Moderating the Influence of Profitability on Firm Value.

H5: The Role of Firm Size in Moderating the Influence of Leverage on Firm Value.

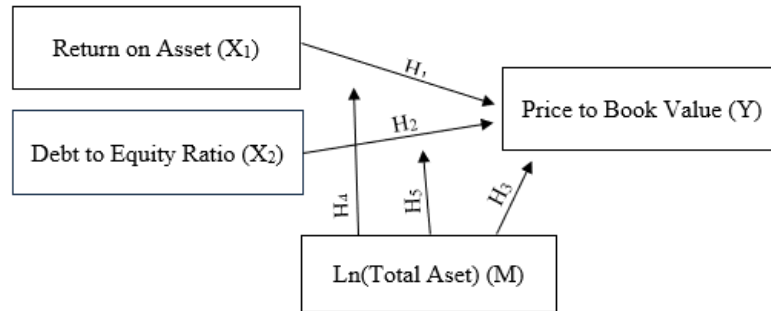


Figure 3. Research Framework

Source : Referring to books (Gibson, 2013; Gitman & Zutter, 2015)

METHOD

This research uses a quantitative approach with data in the form of numbers obtained from the firm's financial statements. The data used is secondary data in the form of property and real estate financial statements listed on the Indonesia Stock Exchange which are analyzed using panel data. Sampling techniques are a method of sampling used to determine the sample to be used in the research (Sugiyono, 2023). The sampling technique in this study is using purposive sampling with a total research sample of 54 companies and with a total of 270 observations due to the use of a period of 5 years.

In this study, the variables used are Price to Book Value (PBV) as a dependent variable, *Return on Assets* (ROA) and *Debt to Equity Ratio* (DER) as independent variables, and Firm Size as a moderation variable. For the definition of operationalization of the variables, each is presented in table 1.

Table 1. Operational Definitions and Measurement of Variables

Variable	Indicator/M Measurement	Scale
Price to Book Value (Y)	$\frac{\text{Market Price per Share}}{\text{Book Value per Share}}$	Ratio
Return on Assets (X ₁)	$\frac{\text{Earning After Tax}}{\text{Total Assets}}$	Ratio
Debt to Equity Ratio (X ₂)	$\frac{\text{Total Debt}}{\text{Total Equity}}$	Ratio
Firm Size (M)	$\text{Size} = \ln(\text{Total Aset})$	Ratio

Source: Gitman et al. (2015); Gibson (2013).

The data analysis employed panel data regression, as the observations combine cross-sectional data from property and real estate companies with time-series data covering the period from 2021 to 2025. The appropriate panel regression model was determined using the Chow test and Hausman test to select among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Based on the model selection results, the Fixed Effect Model (FEM) was selected as the appropriate estimation model. The analysis was conducted using EViews 13.

To examine the moderating role of firm size, this study employed Moderated Regression Analysis (MRA) by incorporating interaction terms between ROA and SIZE and between DER and SIZE. The regression model is formulated as follows:

$$PBV_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 DER_{it} + \beta_3 SIZE_{it} + \beta_4 (ROA_{it} \times SIZE_{it}) + \beta_5 (DER_{it} \times SIZE_{it}) + \varepsilon_{it}$$

Description :

PBV = firm value

ROA = profitability

DER = leverage

SIZE = firm size

ROA $\times$ SIZE and DER $\times$ SIZE represent the moderation effect of the firm's size.

β_0 = constant

β_1 – β_5 = coefficient regressions

i = firm

t = observation period

ε = Error term

The data analysis consisted of descriptive statistical analysis, classical assumption tests, and hypothesis testing. The classical assumption tests included normality, multicollinearity, and heteroscedasticity tests. Hypothesis testing was conducted using the coefficient of determination (R^2), F-test, and t-test. The coefficient of determination (R^2) was used to assess the extent to which ROA, DER, SIZE, and the interaction terms explained the variation in firm value as measured by PBV. The F-test was used to examine the simultaneous effect of ROA, DER, SIZE, and the interaction terms on PBV, while the t-test was used to examine the partial effect of each independent variable on PBV. Furthermore, the interaction terms ROA $\times$ SIZE and DER $\times$ SIZE were included to examine whether firm size moderated the effects of ROA and DER on firm value. The hypotheses were tested at a 5% significance level ($\alpha = 0.05$).

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2. Descriptive Statistics

	PBV_Y	ROA_X1	DER_X2	SIZE_M
Mean	0.828495	0.015125	1.081698	27.86192
Median	0.459337	0.010000	0.377500	28.07001
Maximum	18.87386	0.770000	61.71000	34.87846
Minimum	-19.76850	-0.550000	-55.73000	17.17568
Std. Dev.	2.077352	0.092141	7.140995	2.691906
Observations	270	270	270	270

Source: Secondary data, processed by the authors (2026).

Price To Book Value (Y)

The Price to Book Value (PBV) variable as a dependent variable has a mean value of 0.8285 times, indicating that on average the share price of the sample company is around 82.85% of its book value per share. The standard deviation value of 2.0773 times greater than the mean value shows that the spread of Price to Book Value (PBV) data is quite high, so that there is a considerable difference in company value between companies in the research sample.

The minimum Price to Book Value (PBV) value of -19.7668 occurred at PT. Bliss Properti Indonesia Tbk (POSA) in 2021. A negative Price to Book Value (PBV) indicates that the company's book value per share is negative due to the company's equity also having a negative value, which is a condition when total liabilities exceed total assets. Meanwhile, the maximum value of Price to Book Value (PBV) of 18.8739 times occurred at PT. Grand House Mulia Tbk (HOMI) in 2025, a very high Price to Book Value (PBV) value shows that the company's share price is trading well above its book value per share.

Return on Assets (X1)

The Return on Assets (ROA) variable has a mean value of 0.0151 or 1.51%. The mean value shows that on average the company is able to generate a net profit of 1.51% of the total assets owned. This shows that the company's ability to generate profits from its assets is still relatively low. The standard deviation value of 9.21% which is greater than the average value indicates that the level of profitability between companies varies greatly. In other words, there are companies that are able to generate high profits, but there are also companies that suffer considerable losses. The minimum value of Return on Assets (ROA) of -55% occurred at PT. Bima Sakti Pertiwi Tbk (PAMG) in 2022. A negative Return on Assets (ROA) value indicates that the company has a net loss, so that the assets it owns have not been able to generate profits, even causing losses. On the other hand, the maximum value of Return on Assets (ROA) of 77% occurred at PT. Bima Sakti Pertiwi Tbk (PAMG) in 2024. This value shows that the company is able to generate a net profit of 77% of its total assets, which means that the company is very efficient in utilizing assets to generate profits.

Debt to Equity Ratio (X2)

The Debt to Equity Ratio (DER) variable has a mean value of 1.0817 times. The average value shows that on average the company's total debt is around 1.08 times greater than total equity. This condition shows that the sample company is still quite dependent on funding derived from debt. The standard deviation value of 7.1410 times which is much larger than the average value indicates that the spread of the Debt to Equity Ratio (DER) data is very high. This means that there is a considerable difference in funding structure between companies in the research sample. The minimum Debt to Equity Ratio (DER) value of -55.73 times occurred at PT, Bliss Properti Indonesia Tbk (POSA) in 2021, a negative Debt to Equity Ratio (DER) value indicates that the company's equity is negative, so the calculation of the Debt to Equity Ratio (DER) also produces a negative value. Meanwhile, the maximum value of the Debt to Equity Ratio (DER) of 61.71 times occurred at PT. Ristia Bintang Mahkotasejati Tbk (RBMS) in 2024, This value shows that the company's total debt reaches 61.71 times its total equity. A very high DER indicates that the company has a very large level of leverage so the company's financial risk is also getting higher.

Size (M)

The Company Size variable (SIZE) as a moderation variable is measured using the company's total assets transformed into a natural logarithm (Ln Total Assets). The SIZE variable has an average value (mean) of 27.8619. The average value shows that in general the sample company has a relatively large asset size. The standard deviation value of 2.6919 which is smaller than the average value indicates that the spread of firm size in the study sample is relatively low, so the variation in firm size or total assets between firms is not very large. The minimum SIZE value of 17.1757 occurs in PT Adhi Commuter Properti Tbk (ADCP) in 2025, with total assets of IDR 28,793,940. This value shows that the company has the smallest asset size in the research sample so that its operational capacity, resources, and funding capabilities are relatively more limited than other companies. Meanwhile, the maximum value of SIZE of

34.8785 occurred at PT Gowa Makassar Tourism Development Tbk (GMTD) in 2025, with total assets of IDR 1,404,500,000,000,000. The total amount of assets reflects that the company has greater operational capacity, more adequate resources, wider access to funding, and a higher level of investor confidence.

Panel Data Model Selection

Chow Test

Table 3. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.111470	(53,211)	0.0000
Cross-section Chi-square	155.921227	53	0.0000

Source: EViews Output, 2026.

Based on the Chow Test results presented in Table 3, the probability value is 0.0000, which is lower than the 5% significance level ($0.0000 < 0.05$). Therefore, H_0 is rejected and H_a is accepted, indicating that the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model (CEM) for the final regression model.

Hausman Test

Table 4. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	25.016899	5	0.0001

Source: Eviews Output, 2026.

Based on the Hausman Test results presented in Table 4, the probability value is 0.0001, which is lower than the 5% significance level ($0.0001 < 0.05$). Therefore, H_0 is rejected and H_a is accepted, indicating that the Fixed Effect Model (FEM) is more appropriate than the Random Effect Model (REM) for the final regression model.

Overall, the results of the Chow Test and Hausman Test indicate that the Fixed Effect Model (FEM) is the most appropriate panel data regression model. Therefore, the analysis was not continued with the Lagrange Multiplier (LM) Test. The selected FEM was subsequently used as the basis for the classical assumption tests and the final panel data regression analysis.

Classical Assumption Tests

Multicollinearity Test

Table 5. Correlation Matrix for Multicollinearity Test

	ROA	DER	SIZE	ROA*SIZE	DER*SIZE
ROA	1.000000	-0.011066	0.073218	-0.201438	0.218912
DER	-0.011066	1.000000	-0.021082	0.067143	-0.486472
SIZE	0.073218	-0.021082	1.000000	-0.140163	0.034730
ROA*SIZE	-0.201438	0.067143	-0.140163	1.000000	-0.775506
DER*SIZE	0.218912	-0.486472	0.034730	-0.775506	1.000000

Source: Eviews Output, 2026.

The results of the multicollinearity test using the correlation matrix found that all correlation values between independent variables had a value of less than 0.80. The highest correlation value is found in the variable $ROA \times SIZE$ with $DER \times SIZE$ of -0.775506. Since the

total correlation value between independent variables is below 0.80, it can be concluded that the regression model does not experience symptoms of multicollinearity so that all independent variables are suitable for use in regression analysis.

Heteroscedasticity Test

Table 6. Heteroscedasticity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.612055	0.055583	11.01155	0.0000
ROA_X1_C	-0.234986	0.773495	-0.303797	0.7616
DER_X2_C	-0.084342	0.015547	-5.425097	0.0000
SIZE_M_C	-0.004157	0.040370	-0.102963	0.9181
ROA_X1SIZE_M	0.347457	0.401605	0.865172	0.3879
DER_X2SIZE_M	0.008159	0.019356	0.421535	0.6738

Source: Eviews Output, 2026.

The regression analysis was conducted using the Fixed Effect Model (FEM) as the selected panel data estimation model. To examine the moderating role of firm size, the final model incorporates ROA, DER, SIZE, and the interaction terms $ROA \times SIZE$ and $DER \times SIZE$. Mean-centered variables were used to reduce potential multicollinearity between the main effects and interaction terms. Since the heteroscedasticity test indicated the presence of heteroscedasticity, the final estimation was performed using White diagonal standard errors. The results of the final regression model are presented in Table 7.

Table 7. Fixed Effect Model Estimation with White Diagonal Standard Errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.836595	0.100352	8.336615	0.0000
ROA_X1_C	-0.722665	0.797533	-0.906126	0.3659
DER_X2_C	0.200362	0.115113	1.740565	0.0832
SIZE_M_C	-0.009979	0.012954	-0.770328	0.4420
ROA_X1SIZE_M	0.806952	0.568623	1.419134	0.1573
DER_X2SIZE_M	0.056223	0.030231	1.859771	0.0643
R-squared	0.495329	Mean dependent var		0.828495
Adjusted R-squared	0.356604	S.D. dependent var		2.077352
S.E. of regression	1.666285	Akaike info criterion		4.049544
Sum squared resid	585.8428	Schwarz criterion		4.835866
Log likelihood	-487.6884	Hannan-Quinn criter.		4.365296
F-statistic	3.570585	Durbin-Watson stat		1.636059
Prob(F-statistic)	0.000000			

Source: EViews Output, 2026.

Coefficient of Determination (R^2)

The final model produces an R-squared value of 0.495329, indicating that ROA, DER, firm size, and the interaction terms collectively explain 49.53% of the variation in firm value measured by PBV, while the remaining 50.47% is explained by factors outside the model.

F-Test (Simultaneous)

The F-statistic of 3.570585, with a probability value of 0.0000, indicates that ROA, DER, firm size, and the interaction terms jointly have a significant effect on firm value measured by PBV.

t-Tets (Partial)

- 1) The profitability variable, proxied by Return on Assets (ROA), has a probability value of $0.3659 > 0.05$. Therefore, H_0 is not rejected, indicating that ROA does not have a significant effect on firm value measured by Price to Book Value (PBV) in the property and real estate sector during 2021–2025.
- 2) The leverage variable, proxied by Debt to Equity Ratio (DER), has a probability value of $0.0832 > 0.05$. Therefore, H_0 is not rejected, indicating that DER does not have a significant effect on firm value measured by Price to Book Value (PBV) at the 5% significance level in the property and real estate sector during 2021–2025.
- 3) Firm size (SIZE) has a probability value of $0.4420 > 0.05$. Therefore, H_0 is not rejected, indicating that firm size does not have a significant direct effect on firm value measured by Price to Book Value (PBV) in the property and real estate sector during 2021–2025.
- 4) The $ROA \times SIZE$ interaction term has a probability value of $0.1573 > 0.05$. Therefore, H_0 is not rejected, indicating that firm size does not significantly moderate the effect of ROA on firm value measured by PBV.
- 5) Similarly, the $DER \times SIZE$ interaction term has a probability value of $0.0643 > 0.05$. Therefore, H_0 is not rejected, indicating that firm size does not significantly moderate the effect of DER on firm value measured by PBV.

The Effect of Return on Assets (ROA) on Firm Value (PBV))

The estimation results reveal that ROA carries a negative coefficient of -0.722665, while its probability value is 0.3659. Since this value exceeds 0.05, the effect of ROA on PBV is statistically insignificant. In the context of property and real estate companies, the ability to generate earnings from total assets therefore does not appear to be a sufficient basis for increasing firm value during 2021–2025. Accordingly, the first hypothesis is not supported.

This result suggests that investors may evaluate the performance of property and real estate companies from a broader perspective rather than relying solely on accounting profitability. Factors such as future business prospects, property demand, interest rate movements, investment risk, financing decisions, and overall economic conditions may also shape investor perceptions. Consequently, stronger asset profitability does not automatically translate into a higher market valuation.

From the perspective of Signaling Theory, the finding does not confirm the expectation that stronger profitability conveys a favorable signal about a company's future prospects and subsequently enhances its market value. The result also differs from Wardani & Tjahjono (2025) and Azis & Widati (2023), who reported a positive and significant relationship between profitability and firm value.

The Effect of Debt to Equity Ratio (DER) on Firm Value (PBV))

DER records a positive coefficient of 0.200362, but the associated probability value is 0.0832. Because the probability exceeds the 5% threshold, leverage does not demonstrate a statistically significant relationship with PBV. Hence, the second hypothesis is not supported. Although the direction of the coefficient is positive, the statistical evidence is insufficient to establish that changes in the debt-to-equity composition systematically influence firm value.

The absence of a significant relationship may reflect the dual role of debt in the property and real estate industry. Debt can provide substantial funding for land acquisition, construction, property development, and business expansion. At the same time, excessive dependence on external financing creates obligations that may increase financial exposure. These opposing considerations may cause investors to assess leverage together with the company's ability to utilize debt productively and meet its financial commitments rather than treating the DER level as an isolated determinant of firm value.

This finding differs from Atmadja et al. (2024), who documented a significant effect of leverage on firm value. The discrepancy may arise from differences in research periods, sample characteristics, industry conditions, and investor responses to corporate financing decisions.

Effect of Firm Size (SIZE) on Firm Value (PBV)

Firm size has a coefficient of -0.009979 and a probability value of 0.4420. The probability value is well above 0.05, indicating that SIZE does not have a statistically significant effect on PBV. Thus, the third hypothesis is not supported.

The result implies that asset scale alone does not determine how the market values property and real estate companies. A company may possess a relatively large asset base without necessarily receiving a higher market valuation if those assets do not generate sufficient returns or support attractive future growth. Investors may therefore place greater emphasis on asset productivity, profitability prospects, financial risk, and business development opportunities than on the absolute size of company assets.

This finding does not provide empirical support for Signaling Theory, which suggests that larger firms may communicate favorable information to the market through their greater resources, financing capacity, and perceived business stability. The result also contrasts with Azis & Widati (2023), who found a positive and significant effect of firm size on firm value. The different findings indicate that asset size may not consistently serve as a strong valuation signal across different periods and market conditions.

The Role of Firm Size (SIZE) in Moderating the Effect of Return on Assets (ROA) on Firm Value (PBV)

The interaction between ROA and SIZE produces a coefficient of 0.806952 with a probability value of 0.1573. Since the probability value is greater than 0.05, the interaction is not statistically significant. This means that company size does not alter the relationship between profitability and firm value. Accordingly, the fourth hypothesis is not supported.

The finding indicates that the contribution of profitability to market valuation does not become significantly different as the asset scale of a company increases. In other words, a larger company does not necessarily obtain a stronger valuation response from a given level of profitability. Investors may continue to assess profitability alongside business prospects, property market conditions, financial exposure, and broader economic developments.

The result is not consistent with the signaling perspective that stronger profitability in larger companies should generate a more credible positive signal to investors. Empirically, the finding differs from Susanti et al. (2025), who reported a moderating role of firm size in the profitability–firm value relationship. Conversely, it is consistent with Wardani & Tjahjono (2025), who found that firm size did not moderate the effect of profitability on firm value.

The Role of Firm Size (SIZE) in Moderating the Effect of Debt to Equity Ratio (DER) on Firm Value (PBV)

The $DER \times SIZE$ interaction has a coefficient of 0.056223 and a probability value of 0.0643. At the 5% significance level, this probability value does not meet the criterion for statistical significance. Therefore, there is insufficient evidence that firm size changes the relationship between leverage and firm value, and the fifth hypothesis is not supported.

This result suggests that differences in company scale do not materially change how leverage is reflected in PBV. A larger asset base does not automatically make debt financing more influential in determining market valuation. Investors may instead assess the quality of debt utilization, repayment capacity, financial risk, and expected returns from debt-financed projects.

It is worth noting that the probability value of 0.0643 is below 0.10, but it remains above the 5% significance level established in this study. Therefore, the interaction should be reported as statistically insignificant at $\alpha = 0.05$ rather than being classified as a significant moderating effect.

CONCLUSION

This study finds that Return on Assets (ROA), Debt to Equity Ratio (DER), and firm size do not have significant effects on firm value measured by Price to Book Value (PBV) in property and real estate companies listed on the Indonesia Stock Exchange during 2021–2025. Furthermore, firm size does not significantly moderate the effects of either ROA or DER on firm value. These findings indicate that profitability, leverage, and asset size alone are insufficient to explain variations in firm value during the observation period. Investors may therefore consider broader company-specific and market factors when evaluating property and real estate companies. Future studies are encouraged to incorporate additional determinants of firm value and extend the observation period to obtain more comprehensive evidence.

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