

The Effect of Return on Assets, Debt-to-Equity Ratio, Firm Size, and Sales Growth on The Dividend Payout Ratio in Manufacturing Companies Listed on The Indonesian Stock Exchange from 2014 to 2018

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ABSTRACT

This study aims to analyze the effects of Return on Assets (ROA), Debt-to-Equity Ratio (DER), Firm Size, and Sales Growth on the Dividend Payout Ratio (DPR) among manufacturing companies listed on the Indonesia Stock Exchange during the 2014–2018 period. This study employs a quantitative method with an explanatory approach. The study population consisted of 144 manufacturing companies, while the sample was determined using purposive sampling based on predetermined criteria. The data used consisted of the companies' financial statements during the observation period and were analyzed using multiple linear regression with the aid of SPSS version 21.00. The results indicate that ROA has a positive and significant effect on DPR, DER has no significant effect on DPR, Firm Size has a positive and significant effect on DPR, while Sales Growth has a negative and significant effect on DPR. Simultaneously, ROA, DER, Firm Size, and Sales Growth have a significant effect on DPR. The Adjusted R-Square value of 34.3% indicates that the independent variables in this study explain 34.3% of the variation in the dividend payout ratio (DPR), while 65.7% is explained by other factors outside the research model. This study is expected to serve as a basis for management in determining dividend policies and for investors in making investment decisions.



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INTRODUCTION

The capital market plays a vital role as a funding source for companies and an investment vehicle for investors. Investors make investments with the aim of earning returns, whether in the form of dividends or capital gains. Dividends are a portion of a company's profits distributed to shareholders, while capital gains are profits derived from the difference between the selling price and the purchase price of shares.

Dividend policy is a management decision regarding the proportion of profits distributed to shareholders and the portion retained for the company's needs. This decision must balance the interests of investors with the company's sustainability and growth. Furthermore, conflicting interests between management and investors can lead to agency problems, making dividend policy one of the mechanisms that can mitigate such conflicts. Investors generally prefer stable dividends because they can increase confidence in the company (Sandy and Asyik, 2013).

Cash dividend distributions in Indonesia have shown positive growth. Based on data from the Indonesia Stock Exchange, the value of cash dividends distributed by companies increased from Rp120.28 trillion in 2017 to Rp137.71 trillion in 2018. The number of companies distributing dividends also rose from 221 issuers to 223 issuers. These conditions indicate that dividend policy is a crucial aspect of corporate financial decision-making.

One factor believed to influence dividend policy is profitability. Profitability reflects a company's ability to generate profits and serves as a key basis for its capacity to pay dividends. Return on Assets (ROA) can be used to measure profitability because it indicates a company's ability

to generate profits from its assets. Research by Abdelsalam (2008), Aivazian (2003), Al-Najjar (2009), Al-Kuwari (2009), and Yudhanto and Aisjah (2013) shows that profitability has a positive effect on dividend policy. However, Islam et al. (2012) found different results, namely that profitability has a negative and insignificant effect.

In addition to profitability, capital structure proxied by the Debt-to-Equity Ratio (DER) can also influence dividend policy. The higher the level of debt, the greater the company's obligations to meet payments to creditors, which can reduce the company's ability to pay dividends. Another factor is firm size. Larger firms generally have easier access to financing and thus greater financial flexibility in paying dividends. Studies by Zou et al. (2008), Ooi (2001), Al-Najjar (2009), Huang et al. (2012), Imran (2011), and Hermuningsih (2007) found that firm size has a positive effect on dividend policy, whereas Arif and Akbar (2013) found different results.

Dividend policy can also be influenced by sales growth. High sales growth may prompt a company to use profits to finance expansion, thereby reducing the profits available for distribution as dividends. Wahyudi and Baidori (2008) found that company growth has a significant negative effect on dividend policy. Conversely, Wira (2013) and Hardiatmo and Daljono (2013) state that firm growth does not have a significant effect on dividend policy. Based on this discussion, previous research findings still reveal inconsistencies (a research gap) regarding the factors that influence dividend policy. Therefore, this study aims to examine the effects of ROA, DER, firm size, and sales growth on the Dividend Payout Ratio (DPR) among manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2018.

LITERATURE REVIEW

Profitability

According to Kasmir (2012:196), profitability ratios are used to assess a company's ability to generate profits. These ratios also provide a measure of the effectiveness of a company's management. This is reflected in the profits generated from sales and investment income. Essentially, the use of these ratios indicates a company's efficiency (Zaman, 2018).

Leverage

According to Zaman (2018), leverage ratios aim to measure a company's ability to meet its financial needs, which consist of short-term and long-term debt.

Company Size

Company size is determined by the total assets a company holds. Watts and Zimmerman (1978) hypothesized that large companies are politically more likely to incur political costs within the political process compared to small companies, thereby establishing the "size hypothesis" (Muslichah, 2015).

Sales Growth

According to Onyenwe and Glory (2017), growth is defined as the annual percentage change in a company's total assets between two consecutive years divided by the previous year's figure. A rising growth rate is considered an indication of a company's financial strength and may lead to higher demand for equity financing from external sources. Companies with high growth rates need to increase their financial support to sustain their capital expenditure strategies.

Dividends

Dividends are a portion of profits distributed to a company's owners. Dividend distributions are based on profits, whether retained or current-year profits (Harahap, 2008:295 in Heriyanti and Risa, 2015). According to Zaman (2018), dividends are the distribution of profits to shareholders based on the number of shares they hold. This distribution reduces retained earnings and the cash available to the company.

Based on the description of the previous theory, the research model is presented as follows:

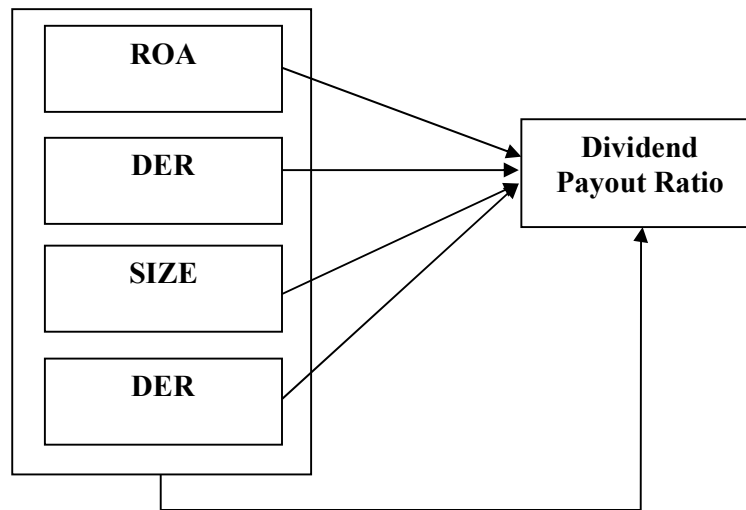


Figure 1. Framework

RESEARCH METHODS

Research Design

This study employs a quantitative method with an explanatory research design aimed at explaining the causal relationships among variables through hypothesis testing (Creswell, 2003; Cooper and Schindler, 2008). This study uses the Dividend Payout Ratio (DPR) as the dependent variable and ROA, DER, Firm Size, and Sales Growth as independent variables for manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2018.

Table 1. Operational Definitions of Variables

Variable	Indicator	Scale
Dividend Payout Ratio (DPR)	$DPR = \frac{\text{Dividen Per Share}}{\text{Earning Per Share}}$	Ratio
Return on Assets (ROA)	$ROA = \frac{\text{Laba Bersih setelah Pajak}}{\text{Total Aset}}$	Ratio
Debt-to-Equity Ratio (DER)	$DER = \frac{\text{Total Hutang}}{\text{Total Ekuitas}}$	Ratio
Company Size (SIZE)	Ln (Total Assets)	Ratio
Sales Growth	$Growth = \frac{Aset_{ti} - Aset_{ti-1}}{Aset_{ti-1}}$	Ratio

Data Collection Method

Research data were collected from the financial statements of manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the period 2014–2018 by recording the necessary data according to the research variables. The data were then analyzed using multiple linear regression with SPSS version 21.00 to test the effect of independent variables on the dependent variable. Before the regression analysis was conducted, descriptive statistical analysis and classical assumption tests were performed.

Population and Sample

The population of this study consisted of 144 manufacturing companies listed on the Indonesia Stock Exchange (IDX), comprising the Basic Industries and Chemicals, Miscellaneous Industries, and Consumer Goods sectors. The sample was determined using a non-probability sampling technique with a purposive sampling method based on the following criteria: (1) the company was listed on the

IDX before 2014, (2) it consistently published financial statements for the 2014–2018 period, (3) it was not delisted during the study period, and (4) it paid dividends during the observation period.

RESULTS AND DISCUSSION

Normality Test

The normality test was conducted to determine whether the data population is normally distributed or not. In this study, the Kolmogorov-Smirnov test was used; the population data is considered normally distributed if the Asymp. Sig (2-tailed) coefficient is greater than $\alpha = 0.05$ (Ghozali, 2013).

Table 2. Results of the Normality Test

Series: Residuals	
Sample 1 170	
Observations 170	
Mean	-1.79e-16
Median	-0.041562
Maximum	0.990380
Minimum	-0.488453
Std. Dev.	0.248776
Skewness	1.132568
Kurtosis	5.253986
Jarque-Bera	72.32998
Probability	0.998562

Based on the output of the normality test above, the Jarque-Bera value is 72.32998 with a probability value of 0.9985. Since the probability value of 0.9985 is greater than the significance level of 0.05, it can be concluded that the data in this study are normally distributed.

Multicollinearity Test

The multicollinearity test aims to determine whether the regression model exhibits correlation among the independent variables. A good regression model should not have correlation among the independent variables (Ghozali, 2013: 105). To test for multicollinearity, a correlation analysis between the independent variables was conducted, along with calculations of the tolerance value and the variance inflation factor (VIF). Multicollinearity occurs if the tolerance value is less than 0.1 (10%) or the VIF value is greater than 10. If the tolerance value is greater than 10% or the VIF is less than 10, it can be concluded that the independent variables used in the model are reliable and objective (there is no multicollinearity) (Ghozali, 2013:106). The results of the multicollinearity test are shown in Table 3 below.

Table 3. Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.041051	109.4242	NA
DER	0.001330	2.877488	1.138731
CP	6.09E-05	2.094268	1.293572
ROA	0.036691	2.747771	1.292227
SIZE	1.73E-08	105.0449	1.127918
GROWTH	0.023843	1.487701	1.130819

Based on Table 3 above, it can be seen that the VIF values for the variables agency cost, capital structure, firm size, and managerial ownership are less than 10. Thus, it can be concluded that all variables are free from multicollinearity because the VIF values are < 10 .

Heteroscedasticity Test

The heteroscedasticity test aims to determine whether there is unequal variance in the residuals from one observation to another within the regression model. A good regression model is one that is homoscedastic, or free from heteroscedasticity (Ghozali, 2013:139). The results of the heteroscedasticity test are shown in Table 4 below

Table 4. Results of the Heteroscedasticity Test

F-statistic	1.353062	Prob. F(5,164)	0.0765
Obs*R-squared	15.76687	Prob. Chi-Square (5)	0.0975
Scaled Explained SS	17.98983	Prob. Chi-Square (5)	0.5030

Based on Table 4 above, it can be concluded that the heteroscedasticity test for each variable yielded a Prob. Obs*R-Squared value of 0.0975. This result indicates that the data for all variables do not exhibit heteroscedasticity because the Prob. Obs*R-Squared value is greater than 0.05.

Autocorrelation Test

The autocorrelation test aims to determine whether, in a linear regression model, there is a correlation between the error terms in a given period and the error terms in the previous period. If such a correlation exists, it is referred to as an autocorrelation problem (Ghozali, 2013:110). The Durbin-Watson test is used to detect autocorrelation; it is calculated based on the sum of the squares of the differences between consecutive estimated values of the disturbance terms. The hypotheses to be tested are:

H0: There is no autocorrelation

Ha: There is autocorrelation

Decision: H0 is rejected if $0 < dw < dl$

The results of the autocorrelation test are shown in Table 5 below

Table 5. Autocorrelation Test Results

N K=5	Calculated DW	4-dU	4-dL	DW Lower Limit Table (dl)	DW Upper Limit Table (du)	Conclusion
170	1.521	2.198	2,282	1,665	1,802	Autocorrelation Present

Based on Table 5 above, the results of the Durbin-Watson autocorrelation test show that the DW-calculated value is 1.521595. This value is compared with the table values for an alpha level of 5%, a sample size (n) of 170, and five independent variables (k=5), yielding the Durbin-Watson table values $dL = 1.665$ and $du = 1.802$.

From the Durbin-Watson value of 1.521595, it can be concluded that $0 \leq dw \leq dl$, with $0 < 1.521 < 1.665$. Therefore, it can be stated that there is no positive autocorrelation.

Hypothesis Testing

Test of the Coefficient of Determination

The Coefficient of Determination (R^2) is used to determine the extent to which the model explains the independent variable. See Table 6 below:

Table 6. Results of the Coefficient of Determination Test

Model Summary				
Model	R	R-Square	Adjusted R-Square	Standard error of regression
1	.602 ^a	.363	.343	.252539

a. Predictors: (Constant), Growth, SIZE, ROA, DER, CP

Based on the data analysis results, the adjusted R^2 value is 0.343. This indicates that the independent variables in this study namely ROA, DER, Size, and Growth collectively explain 34.3%

of the variation in the dependent variable, DPR. The remaining 65.7% is explained by other variables outside the research model.

F-Test

The simultaneous effect of the independent variables on the dependent variable can be determined by conducting an F-test. The independent variables collectively have an effect on the dependent variable if the significance value is less than 0.05. Table 7 shows the results of the F-test in this study:

Table 7. Results of the F-Test

R-squared	0.362582	Mean dependent variable	0.438741
Adjusted R-squared	0.343149	Standard deviation of the dependent variable	0.311599
Standard error of regression	0.252539	Akaike information criterion	0.120157
Sum of squared residuals	10.45928	Schwarz criterion	0.230832
Log-likelihood	-4.213327	Hannan-Quinn criterion	0.165068
F-statistic	18.65762	Durbin-Watson statistic	1.521595
Prob(F-statistic)	0.000000		

The results of the F-test in Table 7 show an F-statistic value of 18.658 and a Prob (F-statistic) of 0.00000. The calculated F-value is greater than the critical F-value ($18.658 > 2.426$), and the probability is less than the significance level ($0.0000 < 0.05$). These results indicate that ROA, DER, firm size, and sales growth collectively (simultaneously) influence DPR in manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2018.

T-Test

Ghozali (2013:98) states that to determine the individual influence of an independent variable in explaining the variation in the dependent variable, a t-test can be used. An independent variable is considered a significant predictor of the dependent variable if the significance probability is less than 0.05. If the calculated t-value (significance probability) is below the table t-value at a significance level of 0.05, then the independent variable has a significant effect on the dependent variable. Conversely, if the calculated t-value is above the table t-value at a significance level of 0.05, then the independent variable does not have a significant effect on the dependent variable. Table 8 presents the results of the partial hypothesis tests in this study as follows:

Table 8. Results of the T-Test

No.	Variable	t-value	Sig.	Conclusion
1.	ROA	5.994	0.000	H1 is supported
2.	DER	0.780	0.437	Ha2 is rejected
3.	SIZE	4.298	0.000	Ha3 is supported
4.	GROWTH	-3,835	0.000	Ha4 is supported

Table 8 shows that the calculated t-value for the ROA variable is 5.994, with a significance level of 0.000. Since the calculated t-value is greater than the critical t-value ($5.994 > 1.974$) and the significance level is less than 0.05 ($0.000 < 0.05$), H01 is rejected and H11 is accepted. Thus, it can be concluded that ROA has a significant positive effect on dividend payout for manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2018. These results indicate that the better a company's ability to generate profits, the better its ability to pay dividends. These findings support Putra's (2013) research, which found that ROA has a significant positive effect on dividend payments. The same result was also found by Wicaksono Mohamad Nasir (2014), who concluded that ROA has a significant positive effect on dividend payments.

Table 8 shows the calculated t-value for the DER variable, which is 0.780, and the significance level of 0.437. Since the calculated t-value is smaller than the critical t-value ($0.780 < 1.974$) and the significance level is greater than 0.05 ($0.437 > 0.05$), H03 is accepted and H3 is rejected. Thus, the results of the hypothesis testing indicate that the DER does not have a significant effect on the dividend payout ratio; this result suggests that the company's debt ratio is not a primary consideration for management when deciding whether or not to pay dividends to shareholders. This is because a high DER can enable a company to grow faster if management effectively utilizes debt to expand investment activities, thereby increasing sales and revenue; conversely, debt becomes a financial burden for the company if it is not managed properly. The absence of a significant relationship between the DER and dividend payments is consistent with the research by Wicaksono Mohamad Nasir (2014), who found that the DER does not significantly affect dividend payments. These results are also consistent with those of Secsio and Prasetiono (2016), who found that the DER does not significantly affect dividend payments.

Table 8 shows the calculated t-value for the firm size variable, which is 4.298, with a significance level of 0.000. Since the calculated t-value is greater than the critical t-value ($4.298 > 1.974$) and the significance level is less than 0.05 ($0.000 < 0.05$), H04 is rejected and H4 is accepted. Thus, the results of the hypothesis testing indicate that firm size has a significant positive effect on the dividend payout ratio; this result suggests that the larger the firm, the greater its ability to pay dividends. These results are consistent with Siregar (2005) as cited in Putu et al. (2014:38), who noted that companies with large total assets demonstrate strong or positive cash flow, and are therefore considered to have good long-term prospects. This also reflects that such companies are relatively more stable and better able to generate profits than companies with small total assets. These results support the research by Djafar and Ratnuaningsih (2015), which found that firm size has a significant positive effect on dividend payments.

Table 8 shows the calculated t-value for the sales growth variable, which is -3.835, with a significance level of 0.000. The calculated t-value is greater than the critical t-value ($-3.835 > 1.974$), and the significance level is less than 0.05 ($0.000 < 0.05$), indicating that H05 is rejected and H15 is accepted. Thus, the results of the hypothesis testing show that company growth has a significant effect on the dividend payout ratio; this result is consistent with Putra (2013), who found that sales growth has a significant effect on dividend payments. The negative relationship between growth and dividend payments indicates that companies that prioritize higher growth rates are more likely to delay dividend payments, as the company's funds will be allocated primarily to finance investment activities.

CONCLUSION

Based on the research results, it can be concluded that ROA has a positive and significant effect on the Dividend Payout Ratio (DPR), DER has no significant effect on the DPR, Firm Size has a positive and significant effect on the DPR, and Sales Growth has a negative and significant effect on the DPR. Simultaneously, ROA, DER, Firm Size, and Sales Growth influence the DPR among manufacturing companies listed on the Indonesia Stock Exchange during the 2014–2018 period. This study has limitations because it only used manufacturing companies as the sample, the observation period was relatively short at five years, and the independent variables used were still limited. Therefore, future research is recommended to expand the sample to include companies from other sectors on the IDX, extend the study period, and add other variables that could potentially influence the DPR, such as institutional ownership and managerial ownership.

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