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THE INFLUENCE OF PROFITABILITY, DEBT TO EQUITY RATIO, FIRM SIZE, INNOVATION, AND TIME DISCOUNTING TO DIVIDEND PAYOUT RATIO

(Case Study on Manufacturing Companies Listed on Indonesia Stock Exchange 2012-2017)

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ABSTRACT

This research aims to analyze the influence of Profitability, Debt to Equity Ratio, Firm Size, Innovation, and Time Discounting to Dividend Payout Ratio on the company which sector in manufacturing companies listed in Indonesian Stock Exchange in period 2012-2017.

This research used secondary data with population consists of 154 manufacturing companies listed in Indonesia Stock Exchange in the period of 2012-2017. The purposive sampling method used was used in selecting the research sample and 22 manufacturing companies that consistently distributed dividends during the research period. The data used in this research were obtained from the Indonesian Capital Market Directory (ICMD) 2012-2017, Bloomberg, IDX Annual Report, and www.idx.co.id. Analysis technique used Ordinary Least Square Regression (OLS), statistical t-test, f-test, and classic assumption test that includes a test of normality test, multicollinearity test, autucorrelation test, and heteroskedastisitas test.

The result of the research are independent variables simultaneously (F test) effect on Dividend Payout Ratio with a significance level of 0.000. While partially (t test) showed that the variable Free Firm Size and Innovation have positive and significant effect on Dividend Payout Ratio. Variable Debt to Equity Ratio and Time Discounting have negative and significant effect on Dividend Payout Ratio. Profitability has positive and not significant effect on Dividend Payout Ratio. Adjusted R2 is 0,294 which means that the ability of the five independent variables can explain Dividend Payout Ratio amounted to 70,6%, while the rest is explained by other factors

Keywords: *dividend payout ratio, profitability, debt to equity ratio, firm size, innovation, time discounting, and regression analysis.*

INTRODUCTION

Dividends are the share of profits from net income earned by the company to be received by shareholders, the amount of dividends to be received by shareholders depends on the company's policy. Dividend policy is a form of decisions such as profits earned by the company at the end of the year, whether to be distributed to the shareholders or to be held in the form of retention of profits for the need of investment financing in the future. Fama and French (2001) state that dividend policy centered on the practice where the firms make a dividend payout policy. The amount of dividends distributed relates to the

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distribution of income used by the company as a retained earning or distributed to shareholders. Gill et al., (2010) states that the company should be able to determine the size and distribution pattern of profit earning to shareholders from time to time on determining dividend policy. Breur, Rieger, and Soypak (2014) explain that the company on determining the dividend policy required consistency and prediction ability.

Dividends distributed by the company have important information about the company's financial condition. Companies in determining the dividend policy should pay attention to the large proportion of dividends based on the company's profit. Based on the theory of Bird in The Hand, Lintner (1962) and Gordon (1963) states that investors tend to prefer high dividends if compare with the acquisition of capital gains, because there is a high enough risk in future investments. If the profits earned by the company will be retained for the sake of future investments will affect the interests of shareholders against to the money that is neglected. If the company makes a dividend payment to the shareholders, the interest of the cash reserves is negligible. If the company do a dividend payment to the shareholders, the importance of the cash reserves is negligible. To maintain the importance of the dividends, the company must perform an optimal dividend policy.

The optimal dividend policy will maximize the stock price of a company by generating dividends with balanced corporate growth. According to Brigham and Houston (2009) the optimal dividend policy is the ratio of dividend policy with due regard to the balance of current dividends with the growth of future investment.

Research on dividend policy has often been done by previous research, but there is still few researches that elaborate directly and empirical about the relevance of behavior patterns as one of the relevant determinants of corporate dividend policy. This study measures the dividend payout ratio policy. Based on the previous researches about devidend policy found that the factors should to consider in determining dividends by firms such as profitability, debt to equity ratio, firm size, innovation and time discounting. In this case the dividend payout ratio is used as the dependent variable, while the independent variable consists of profitability, debt to equity ratio, firm size, innovation and time discounting variables.

Based on the above problem formulation, it can be formulated research questions as follows: (1) Does the profitability affect to the dividend payout ratio in manufacturing companies in the period 2012-2017 (2) Does the debt to equity ratio affect to the dividend payout ratio in manufacturing companies in the period 2012-2017 (3) Does the firm size affect to the dividend payout ratio of the manufacturing company in the period 2012-2017 (4) Does innovation affect to the dividend payout ratio in manufacturing company period 2012-2017 (5) Does the time discounting affect to the dividend payout ratio in the manufacturing company period 2012-2017.

THEORETICAL THINKING FRAMEWORK AND HYPOTHESES FORMULATION

Influence of Independent Variable on Dependent Variables

The Effect of Profitability on Dividend Payout Ratio

Profitability ratios are taken as research material in the form of ROA. The relationship between the profitability ratio and the dividend payout shows that firms with higher profit values tend to pay dividends. The relationship between the profitability ratio and the dividend payout shows that firms with higher profit values tend to pay dividends. The relationship between the profitability ratio and the dividend payout shows that firms with higher profit values tend to pay dividends (Brigham dan Houston, 2009). This is in accordance with the smoothing theory of companies with high and stable earnings tend to

distribute the higher dividends. Investors tend to be more respectful and secure if they earn revenue from dividend payouts than earn of capital gain (Lintner, 1956). Dividend revenue that shared by the company can provide the benefits because it gives a signal to shareholders about the likelihood profitability of the company in the future (Breur, Rieger, dan Soypak, 2014).

Hypothesis 1: Profitability (ROA) has a positive effect on dividend payout ratio.

Effect of Debt to Equity Ratio to Dividend Payout Ratio

The proportion of debt's company used to finance operational activities indicates the risk of a firm's ability to provide dividends (Khan and Ashraf, 2014). The greater the proportion of debt to equity ratio used for corporate capital needs, the higher the proportion of the firm's dependence on external parties in paying its obligations. The greater proportion of debt to equity ratio used for corporate capital needs, the higher the proportion of the firm's dependence on external parties in paying the obligations. The increased debt ratio will affect to the amount of net profit earned by shareholders, because the company prefers to allocate the profit to pay the obligations rather than to dividend, thus affecting the rate of shareholder dividend receipt. Given these circumstances create the impetus for the company to execute retained earnings so that the amount of internal equity that holds is likely to be safe and may diminish the proportion of possible use of external equity.

Hypothesis 2: Debt to equity ratio (DER) has a negative effect on dividend payout ratio.

Effect of Firm Size on Dividend Payout Ratio

Dividends distributed to shareholders have relevance to firm size, based on the concept of smoothing theory pioneered by Lintner (1956), companies in the utility group (large) have historically distributed higher dividends. Jensen and Clifford (1994) in their research noted that a dividend-sharing policy raises the frequency of firms in obtaining new capital from the capital market. They also argue that the high frequency of capital will raise assets and firms will pay high dividends as a way to bind shareholders. Yusof and Suhaiza (2016) high frequency of capital will raise assets and firms will pay high dividends as a way to bind shareholders.

Hypothesis 3: Firm size has a positive effect on dividend payout ratio.

Effect of Innovation on Dividend Payout Ratio

Companies that engage in investment activities in the form of innovations with higher costs of Research and Development (R&D) tend to have higher expectations of uncertainty the future over returns on their investments. A rational company will endeavor to collect informations relating to current conditions, based on those informations the company makes an expected exposure to R&D investment do with the expectation return of profit in the future. This explicitly shows companies with large R & D levels improving the positive returns in the future (Nagasawa, 2016).

Hypothesis 4: Innovation has a positive effect on dividend payout ratio.

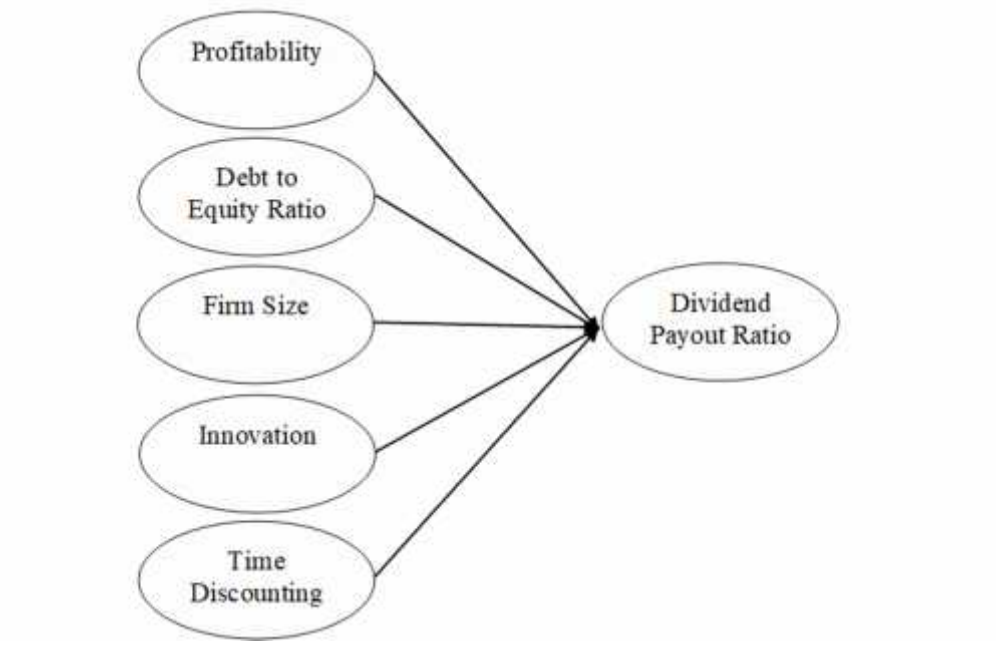
The influence of Time Discounting on Dividend Payout Ratio

Time discounting as a behavioral variable that can influence the dividend decision, in its role can be used as a tool to identify the effect of the difference of the behavior in compiling dividend policy. The management will require access to the parameters of preference or investor's desire for the company under consideration. Investors with the short horizon type in consumption activities tend to choose to pay some income as

dividends (Breur, Rieger, dan Soypak, 2014). Investors prefer dividend payouts to avoid obscurity (Cyert and March, 1993).

Hypothesis 5: Short horizon time discounting has a negative effect on dividend payout ratio.

Picture 1
Theoretical Framework



Source: Breur, Rieger, dan Soypak (2014), Khan and Ashraf (2014), Yusof and Suhaiza (2016), Nagasawa (2016)

RESEARCH METHODS

Variables used in this research is six variables consisting of one dependent variable that is Dividend Payout Ratio (DPR) and five independent variables are Profitability (ROA), Debt to Equity Ratio, Firm Size, Innovation and Time Discounting. The population to be used in this research is all companies incorporated in the Manufacturing sector listed on the Indonesia Stock Exchange (IDX) from 2012 until 2017. The sample selection was conducted based on purposive sampling method. The number of companies that are used as research samples incorporated in the Manufacturing sector listed on the Indonesia Stock Exchange period 2012 to 2017 as many as 22 companies. In this study the data used are secondary data derived from data of companies incorporated in the Manufacturing sector in Indonesia Stock Exchange period 2012 to 2017. The tests for the research was conducted using by SPSS software. Hypothesis testing using multiple linear regression test and pre test is done by classical assumption test with some test such as normality test, autocorrelation test, multicolinearity test and heteroscedasticity test.

RESEARCH RESULT AND DISCUSSION

Description of Research Objects

The objects of research used in this research are all manufacturing companies listing on the Indonesia Stock Exchange in the period 2012 to 2017 as many as 144

companies. Based on the selection of sample criteria, then obtained 22 companies that comply the criteria of the research samples. From 22 samples of the company were obtained 82 research observations. In the regression analysis there is a requirement that data must be normally distributed. Based on the above, one way to normalize the research data is by eliminating the outlier data. In this research there are 12 data outliers consisting of research that is eliminated to normalize the distribution of research data, so the number of research observations to be 70.

Descriptive Statistics

Table 1
Descriptive Statistics Analysis Results

Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviasion	N
LnDPR	2,12	4,54	3.4273	0.46448	70
ROA	0,92	25,33	10.2276	5.35057	70
DER	0,09	2,75	0.6899	0.61277	70
SIZE	26,48	31,52	29.0857	1.37615	70
RND	16,08	26,20	22.3746	1.92017	70
TD	-1,49	1,77	-0.0130	0.60164	70

Sumber : Output SPSS 21, data sekunder that has been processed.

Normality Test

Normality test in this research using graph analysis, normal probability plot and statistical test nonparametric kolmogorov-smirnov (K-S).

Table 2

One-Sample Kolmogorov-Smirnov Test

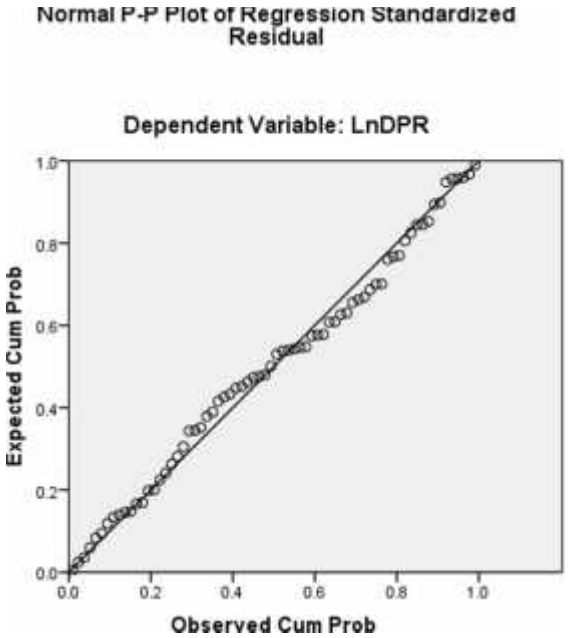
		Unstandardized Residual
N		70
Normal Parameters[a,,b]	Mean	.0000000
	Std. Deviation	.37589208
Most Extreme Differences	Absolute	.063
	Positive	.063
	Negative	-.056
Kolmogorov-Smirnov Z		.530
Asymp. Sig. (2-tailed)		.941

a. Test distribution is Normal.

b. Calculated from data.

In table 2 can be seen that the Kolmogorov-Smirnov test score (K-S) shows a significance level of 0.941. This means that the residual values are normally distributed or comply the classical normality assumptions.

Picture 2
Normal P-P Plot



Whereas when viewed in the results of Normal Probability Plot is based on the image graph 2 shows that the distribution of data shown by the dots spread around the diagonal line and follow the direction of the diagonal line that shows the normal distribution pattern.

Multicollinearity Test

Multicollinearity test aims to test whether in a regression model found a correlation between independent variables (independent variables). According to Ghozali (2011) shows the existence of multicollinearity Tolerance value <0.10 or equal to VIF value> 10.

Table 3
Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	ROA	.711	1.406
	DER	.754	1.326
	SIZE	.835	1.198
	RND	.800	1.251
	TD	.892	1.121

a. Dependent Variable: LnDPR

Based on the results from table 3 above shows that overall all independent variables have a tolerance value above 0.10 and the value of variance inflation factor (VIF) is less than 10. So it can be concluded that overall there is no multicollinearity among independent variables in the regression model.

Autocorrelat ion Test

The autocorrelation test aims to test whether in linear regression model there is a correlation between intruder errors in a period with errors in the previous period (Ghozali, 2011). The autocorrelation test in this study used Watson Durbin Test.

Table 4
Durbin Watson Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.587[a]	.345	.294	.39030	1.951

a. Predictors: (Constant), TD, ROA, SIZE, RND, DER

b. Dependent Variable: LnDPR

Based on the result from table 4, the value of DW test is 1,951 which shows that at the 5% significance level with the number of samples used are 70 data with the number of independent variables of 5 variables (k = 5), therefore obtained dU value is 1.768. Thus the DW value is between dU 1.768 and 4-dU = 4-1.768 = 2.231 or 1.780 <1.951 <2.231 indicating that there is no autocorrelation.

Heteroscedasticity Test

Heteroscedasticity test is done with the aims to know whether there is variance from one residual observation with other observation. In testing the research heteroscedasticity use glejser test and scatterplot chart.

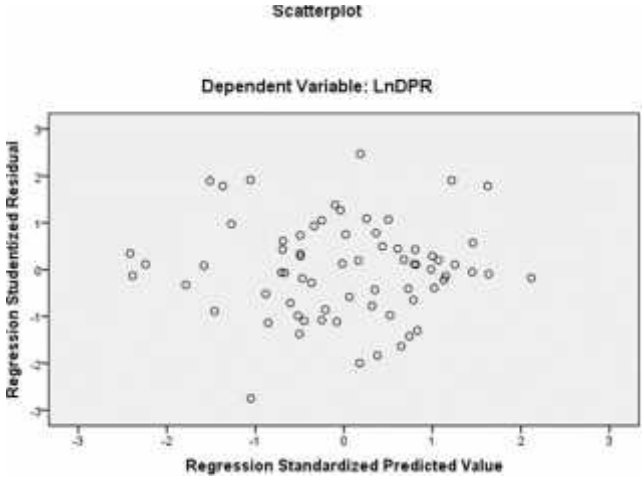
Table 5
Glejser Test Results

Glejser Test

Model		t	Sig.
1	(Constant)	3.137	.003
	ROA	1.171	.246
	DER	-.131	.896
	SIZE	-2.756	.909
	RND	.105	.916
	TD	-.253	.801

Based on the results of glejser test in table 4 shows that the level of significance on each variable shows results above 0.05. This means there is no heteroscedasticity in the regression model.

Picture 3
Scatterplot Result



Source: Output SPSS 21, secondary data that has been processed.

Based on the results shown in figure 3 of the scatterplot chart above we can see that the points spread randomly and spread over and below the number 0 on the Y axis, so it can be concluded that there is no heteroscedasticity in the regression model.

Multiple Linear Regression Analysis

Determination Coefficient Test (R^2)

The coefficient of determination (R^2) describes which the ability of the independent variable can explain the dependent variable. The coefficient of determination is used to test the goodness-fit of the regression model. The following is the coefficient of determination obtained from the adjusted value (R^2):

Tabel 6
Hasil Uji Koefisien Determinasi (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.587[a]	.345	.294	.39030	1.951

a. Predictors: (Constant), TD, ROA, SIZE, RND, DER

b. Dependent Variable: LnDPR

Source: Output SPSS 21, secondary data that has been processed.

Based on table 4.7 it can be seen that value of adjusted R Square is 0,294. It means that the DPR variable can be explained by ROA, DER, SIZE, RND, and TD variables of 29.4%. While the remaining 70.6% is explained by other variables outside the model.

Simultaneous Effect Test (F test)

The F-Statistic test is performed to determine whether all the independent variables included in the model have a mutual influence on the dependent variable.

Table 7
F Test Result

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.137	5	1.027	6.744	.000[a]
	Residual	9.749	64	.152		
	Total	14.886	69			

a. Predictors: (Constant), TD, ROA, SIZE, RND, DER

b. Dependent Variable: LnDPR

Source: Output SPSS 21, secondary data that has been processed.

Based on table 7 can be obtained the value of F arithmetic is equal to 6.744 with a significance value of 0.000. With the results of significance smaller than 0.05 can be concluded that the variables ROA, DER, SIZE, RND, and TD simultaneously have a significant effect on DPR variables.

Partial Test (t test)

This test is used to explain the relationship generated by the independent variable of influence on the dependent variable that can be seen from the magnitude of significance value.

Table 8
Results of Multiple Linear Regression Analysis and Test t

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.311	1.050		-.296	.768
	ROA	.013	.010	.147	1.222	.226
	DER	-.205	.088	-.270	-2.317	.024
	SIZE	.085	.037	.253	2.284	.026
	RND	.057	.027	.234	2.066	.043
	TD	-.195	.083	-.253	-2.364	.021

a. Dependent Variable: LnDPR

Source: Output SPSS 21, secondary data that has been processed.

Table 8 presents the results of multiple regression analysis results, from the results can be formulated into regression equations, as follows:

DPR = -0,311 + 0,013 ROA – 0,205 DER + 0,085 SIZE + 0,057 R&D – 1,095 TD

Based on Table 8, the result of Profitability variable with beta value (β) equal to 0,013 with significance level equal to 0,226. This shows that Profitability variable has

positive effect but not significant to Dividend Payout Ratio because its significance level is above 0.05. Thus Hypothesis 1 is rejected.

Based on Table 8, the result of Debt to Equity Ratio variable with beta value (β) equal to -0.205 with significance level equal to 0,024. This shows that Debt to Equity Ratio variable has negative and significant effect to Dividend Payout Ratio because the level of significance is below 0.05. Thus Hypothesis 1 is accepted.

Based on Table 8, the result of Firm Size variable with beta value (β) equal to 0,085 with significance level equal to 0,026. This shows that Firm Size variable has positive and significant effect to Dividend Payout Ratio because its significance level is below 0.05. Thus Hypothesis 1 is accepted.

Based on Table 8, the result of innovation variable with beta value (β) is 0,057 with significance level equal to 0,043. This shows that the innovation variable has a positive and significant effect on the dividend payout ratio because the level of significance is below 0.05. Thus Hypothesis 1 is accepted.

Based on Table 8, the result of short horizon time discounting variable with beta (β) value is -0.195 with significance level of 0,021. This shows that the variable short horizon time discounting has a negative and significant effect on the dividend payout ratio because the level of significance is below 0.05. Thus Hypothesis 1 is accepted.

CONCLUSION

Based on the results of the analysis and research that has been done then it can be simultaneously known independent variables such as profitability, debt to equity ratio, firm size, and time discounting innovation togetherly affect the dependent variable that is dividend payout ratio in manufacturing sector companies listed in Indonesia Stock Exchange period 2012-2017. Partially shows that the variable debt to equity ratio and time discounting have a significant negative effect on dividend payout ratio. While firm size and innovation variables significantly positive effect on dividend payout ratio. The profitability variable has a positive effect but not significant on the dividend payout ratio. The value of adjusted equations simultaneous dividend payout ratio shows the value of 0.294, this shows the ability of exogenous variables such as: profitability, debt to equity ratio, firm size, and time discounting in influencing variable endogen (dividend payout ratio) of 29.4% is explained by other variables outside the research model. The F value of the simultaneous equation of dividend payout ratio shows the value of 0.06744 and the F-statistic Prob value of 0.000 (less than 0.05).

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