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Determinants of Dividend Policy on Development Board Index: Manufacturing Sector in Indonesia Stock Exchange (IDX)

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Abstract

This study aims to investigate the determinant factors that affect dividend policy in Development Board Index (DBX), with the manufacturing sector listed in Indonesia stock exchange (IDX) and the period 2018-2021. There are independent variables such as ROA, debt, sales growth and firm age and dividend policy as dependent variables. The study population are manufacturing companies which are listed on the development board index. This study examines 8 companies with a total of 32 data samples. The panel data regression with random effect model was used to analyze data. The results of this study are ROA, and sales growth has an impact on dividend policy. ROA has a positive impact, and sales growth has a negative impact on dividend policy. Meanwhile, debt and age have no significant impact on the dividend policy.

*Keywords***: *Development Board Index, Dividend Policy, Profitability, Debt, Sales Growth*

INTRODUCTION

The increasing threat of health and economic crisis has caused foreign investors to withdraw their funds and be replaced by local investors who are the main driving force for domestic stock exchange transactions. Institutional investors, such as mutual funds, pension insurance and pension funds, were previously able to replace foreign investors. There are several possibilities that might be the cause of this phenomenon, for example the case of the closing of 37 investment manager companies (MI) at the end of 2019 and the negative sentiment of blocking 800 securities accounts related to PT Asuransi Jiwasraya (Persero). Passive attitude does not even increase the allocation in shares due to these conditions, even local institutions are just waiting for the moment to sell shares to avoid *cut-losses.* A different temperament is shown by local retail investors, where local institutional investors usually prefer *blue chip stocks.* Local retail investors like stocks that can provide *returns* in a short time coupled with minimal capital. As a result of this investment style, stocks with medium-small market capitalizations immediately sprang up and produced relatively good performance, as reflected in the movement of the Development Board Index. The increasing interest of local retail investors towards stocks with medium capitalization on the development board, caused the share price to soar relatively high compared to the stocks on the Main Board.

Table 1.
Index Return Of Indonesia Stock Exchange

Index Name	1 Year	3 Year	5 Year
Development Board	86,80%	70,01%	141%
Mainboard	11,74%	-3,30%	8,54%
IHSG Composite	21,21%	6,18%	1,63%
LQ45	9,24%	-5,41%	-0,42%

Sumber: (*https://insight.kontan.co.id/2021*)

Based on those data, it can be concluded from the comparison of 4 returns index that the Development Board has the largest return with a large percentage difference. It can be seen that the development board has the largest return with a percentage difference that is far adrift compared to the index returns of the other three boards. The increased opportunities to invest in the Development Board is expected to increase, it also gives new options to invest in the capital market.

Dividend policy is relevant because of the problem of information asymmetry and agency conflict experienced by the company. On the development board listing companies experience more information asymmetry problems in convthe company, on the other hand the company must use its profits for operations and business expansion. Trying to improve earnings quality to investors, companies listed in DBX tend to pay dividends with a high ratio as a signal. The company uses dividend payments to increase the value of the optimal dividend policy is a dividend policy that is able to balance the current dividend ratio with financing business expansion activities so as to maximize the company's share price (Houston, 2018).

A dividend policy is a company's policy to either pay out profits to investors or keep profits for business expansion activities. If the company decides to pay dividends, the funds used to expand the business will be reduced and vice versa. In practice, companies tend to pay stable dividends or pay dividends commensurate with the company's income. Investors see dividends as a positive signal that a company's prospects are good, and vice versa. The company's increasing dividend payout is seen by investors as a positive sign that the company will grow further in the future, and vice versa. Against the background of the above problems, the purpose of this study is to analyze the factors that influence

dividend policy. Variables tested for impact on company dividend policy are ROA, company debt, company sales earnings growth, and company age.

LITERATURE REVIEW

A company's ability to generate profit from its assets is reflected in its profitability. Profitable companies have the opportunity to pay or increase their dividends. Companies with high cash flow or high profitability can pay dividends or increase their dividends. Management pays dividends to shareholders to let them know that the company has managed to turn a profit. Signal theory states that a dividend policy provides an informational signal about a company's future earnings, and an increase in dividends is a signal of a company's future earnings growth (Houston, 2018).

Policy obligations are guidelines related to a company's decision to conduct business using financial obligations (Houston, 2018). A measure of a company's financial liabilities is its debt-to-equity ratio. DER, ratio of total debt to total equity. The higher the DER. The indicator indicates that the company is highly dependent on external parties (creditors) and has high borrowing costs that the company must bear. An increase in debt affects the amount of net income available to shareholders, including dividends received.

Growth is the increase in the number of sales from year to year or from time to time. If sales activities grow steadily, it can be said that the company is growing in a positive direction. The higher the company's turnover, the more profit it generates. Firms with relatively stable earnings can borrow more than those with volatile earnings because of their relatively stable cash flow (Houston, 2018).

age is defined as the ability to maintain a *going concern* or existence in the business world. Company age is calculated from the start of the company carrying out operational activities (Nugroho, 2012). Company age is a form of company continuity in maintaining its business, showing the company still exists, is able to compete in the business world and shows the purpose of the company.

Hypothesis Development

A hypothesis is a temporary answer to a research problem whose truth remains to be tested empirically. To provide a temporary answer to this research, it is necessary for the researcher to put forward a hypothesis, namely premium income, underwriting ratios, return on investment and return on equity affect the profit of insurance companies. Companies with high profitability are believed to be able to generate high earnings in order to increase corporate value. The more profitable a company, the more aggressive its dividend policy. In other words, the higher the company's profit, the higher the dividend distributed. ROA measures the return from operating all existing. The ROA formula according to Houston (2018): *Return On Assets = (Net Profit)/(Total Assets)*

Agreements generally limit the payment of dividends sourced from company income (Houston, 2018). Decreasing profitability is caused by higher interest costs, this will reduce the rights of shareholders in the form of dividends, subject to paying interest. Debt is the company's policy for financing the business. The DER formula according to Houston (2018): DER = (Total Debt)/(Total Capital)×100%

Companies with relatively stable earnings have more opportunities to earn credit and incur higher fixed costs than companies with more volatile earnings (Houston, 2018). This opportunity for business expansion prompted the company to focus on its fundraising operations. As such, the profits made are more likely to be used to fund those activities, reducing the percentage of dividend payments to shareholders. Annual sales growth rate is expressed as sales growth rate. The DER formula according to Houston (2018): Sales Growth = Current Sales - Last Year Sales / Last Year Sales

According to life cycle theory, the older the company, the more mature and established the business. The smaller investment opportunities are characteristic of companies that have entered the mature phase, and companies in this category tend to reduce their retained earnings, potentially increasing their dividends. With smaller investment opportunities and established business capabilities coupled with years of experience these organizations tend to pay positive dividends during crises. The age of the company is the difference between the research year and the nth year when the company was first

established. Age of the company according to (Collins, 2001) AGE = Year of research - Year of establishment of the company. ased on the description above, the proposed hypothesis is:

H_1 = ROA have a positive impact on dividend policy.

H_2 = Debt has a negative impact on dividend policy.

H_3 = Sales growth has a negative effect on dividend policy.

H_4 = Age Has a positive Impact on dividend policy.

METHODOLOGY

In this study the data used is panel data, panel data is data that has a number of *cross sections* and a number of *time series*. The data collection procedure used is a documentation technique with secondary data in the form of annual financial reports through the official IDX website (www.idx.co.id), (www.eddyelly.com), (RTI) and (www.sahamok.net). Data collection was carried out by recording and selecting all the data needed in this study.

This study uses a quantitative approach. The data comes from the company's financial statements on the Indonesian Stock Exchange (IDX). The data used should have the following criteria:

1). Manufacturing companies listed on the Indonesian Stock Exchange from 2018 to 2021 consecutively

2). Companies with full financial reports for 2018-2021

3). Companies with positive earnings in the survey period 2018-2020

Four). Companies paying continuous cash dividends from 2018 to 2021

Based on the target sampling method, 32 objects from board manufacturers meet these criteria and become the study sample. The analytical methods used are descriptive analysis and panel data regression analysis with robust standard errors.

Figure 1
Framework
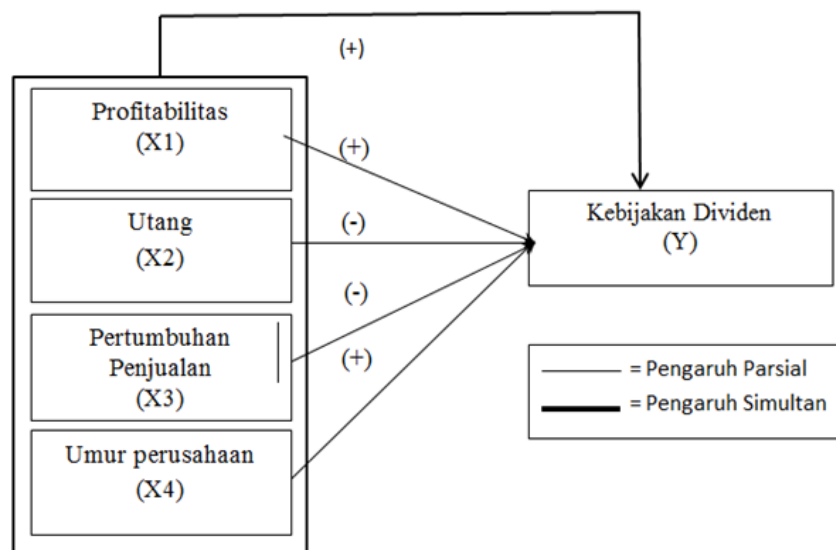
FINDING AND DISCUSSION
1). Descriptive Statistics
The descriptive statistic displays the mean, standard deviation, the maximum, and the minimum used to describe the sample and analyze the data of the study
.
Table 2.
Descriptive Statistic

Variable	Obs	Mean	Std. Dev.	Min	Max
DPR	32	0.392	0.358	0.015	1.096
ROA	32	0.111	0.138	0.015	0.504
DER	32	0.738	0.370	0.1	1.437
Growth	32	0.110	0.178	-0.22247	0.445
Age	32	42.25	8.765	30	62

This table shows that the number of data (N) is 32. This is the panel data collected from 2018-2021. The DPR variabel has the lowest value at 1.5%, and the highest is 39.2%. The ROA variabel has the lowest value at 1.5%, and the highest is 50.4%. The DER variabel has the lowest value at 10%, and the highest is 143.7%. The Growth variabel has the lowest value at -22.2%, and the highest is 44.5%. The Age variable has the lowest value at 30 years, and the highest is 62 years.

Classical Assumption Test
Table 3.
Normality Test

Variable	Obs	Pr (Skewness)	Pr (Kurtosis)	Adj chi2(2)	Prob>chi2
normal	32	0.0385	0.5538	4.66	0.0971

Skewness and Kurtosis test is carried out to determine the normality of the regression model. significance level of 0.0971 means that the significance value is less than 0.05. This means that the data is normally distributed.

Table 4.
Autocorrelation Test

Wooldridge test for autocorrelation in panel data	
H0 : no first-order autocorrelation	
F (1, 7)	2.396
Prob > F	0.1656

Wooldridge test is applied to determine the autocorrelation of the regression model. Based on the output, probability> F is 0.1632 more than 0.05 . Therefore, it could be concluded that there is no autocorrelation detected.

Table 5.
Multicollinearity Test

Variabel	dpr	ROA	Debt	Growth	Age
DPR	1				
ROA	0.3691	1			
DER	-0.2293	0.0240	1		
Growth	-0.4111	-0.0552	-0.0355	1	
Age	0.3175	0.7394	-0.1459	-0.0750	1

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The multicollinearity test tests whether there is a relationship between independent variables in a regression model. Based on the results obtained, the tolerance for each variable exceeds 0.8. Therefore, we can conclude that there is no correlation between the independent variables.

Table 6.
Heteroskedasticity Test

Modified Wald Test For Heteroskedasticity	
chi2 (8)	12392.58
Prob>chi2	0

Wald test is used to determine the heteroskedasticity. Based on the output, probability> F is 0.0000 less than 0.05. Therefore, it could be concluded that heteroskedasticity problems were detected. The classical assumption test was carried out so that the panel data regression test in this study had unbiased and significant results. To overcome heteroscedasticity, the researcher uses *robust standard error* when performing panel data regression, this method is able to maintain the efficiency of the estimator by adjusting the standard error, without having to eliminate the unbiased nature (Gujarati, 2009).

Panel Data Regression
After determining the model used in the study, it was concluded that the random-effects model was the most appropriate model. Robust standard errors not only overcome the possibility of heteroscedasticity, but also errors that can occur in the specification of the variance function when using generalized least squares (GLS). can be used. (Hill, Griffiths, and Lim, 2010).

Table 7.
Panel Data Regression Analysis

	dpr
ROA w	1.098*
	(0.044)
DER	-0.122
	(0.545)
Growth	-0.712***
	(0.000)
Age_w	-0.00179
	(0.892)
_cons	0.514
N	32
R-sq:	0.3315
Prob > chi2	0.0001

Nilai t statistics (* $p<0.05$, ** $p<0.001$, $p<0.01$, ***)

Based on what is presented in table 7, a regression line equation can be arranged, namely:

$$DPR_{it} = 0.514 + 1.098*ROA - 0.122*DER - 0.712*Growth - 0.00179*Age_{it}$$

The results of the above equation can be interpreted respectively, among others :

a. The constant is 0.514464, indicating that the dividend policy variable (DPR) will be positive 0.514464 if the profitability (ROA), debt (DER), sales growth (*Growth*), and company age (*Age*) are 0.

b. Coefficient of profitability (ROA) is 1,098, meaning that for every 1 percent addition to the profitability variable, assuming other variables are held constant, the dividend policy will increase by 109 percent.

c. Debt coefficient (DER) is -0.122, meaning that each addition to the debt variable is 1 percent, assuming other variables are held constant, the dividend policy will decrease by 12.2 percent.
d. The coefficient of the Sales Growth variable (*Growth*) is negative 0.712, meaning that every addition to the Sales Growth variable is 1 percent, assuming other variables are held constant, the dividend policy will decrease by 71.12 percent.
e. The coefficient of Company Age (*Age*) is negative 0.0017896, meaning that each addition to the age variable is 1 unit, assuming other variables areconsidered constant, the dividend policy will decrease by 0.17.

Goodness of Fit Determination
Coefficient of Determination (R^2)
   The adjusted R-squared value is 0.3315. From this we can conclude that 33.15% of the DPR variables can be explained by ROA, DER, growth and age. The remaining 66.85% are explained by independent variables not explained by the model.

F test
   Based on table 3, the results of the sig value <0.05, meaning that simultaneously all the independent variables of profitability (ROA), debt (DER), sales growth (*Growth*), and company age (*Age*) affect the dependent variable (dividend policy) .

Partial Test (t test)
   The results of hypothesis testing (t test) can be concluded that: The results of the analysis show that

1). Profitability (ROA) has a significance value of 0.044 <α (0.05) and a coefficient value of 1.098. The results of the analysis show that Sales (*Growth*) has a negative coefficient value of 0.712 with a significance of 0.000 < (0.05). This shows that the variable sales growth (growth) has a significant negative effect on dividend policy.
2). The results of the analysis show that Debt (DER) has a coefficient value of -0.122 and a significance value of 0.545>α (0.05). This shows that the debt variable has no effect on dividend policy, so hypothesis 3 is rejected. The results of the analysis show that Age Has A coefficient value of -0.0017896 and a significance of 0.892 < (0.05). This shows that the age of the company has no effect on dividend policy, so hypothesis 4 is rejected.

   The partial test results show that profitability has a positive and significant effect on dividend policy. The positive effect describes the unidirectional influence between profitability and dividend policy, meaning that if there is an increase in the profitability ratio, it will be followed by an increase in the dividend payout ratio. The significance below five percent illustrates that profitability has an important influence on the amount of the dividend payout ratio of manufacturing companies listed on the IDX. The results of research with a significant positive effect in this study are supported by (Cheng-Wen Lee, 2022), (Sari, 2021), which states that there is a significant positive effect between ROA on DPR, it is explained that the company distributes dividends because it has fulfilled all its investment needs, in accordance with with the priority that the company has reached the level of internal funding, so that the remaining cash can be used as dividends. This study is not in line with the results of research (Hesniati, 2019), and (Wahjudi, 2018) which state that profitability has no effect on dividend policy.

   Dividend policy is not affected by company debt. The insignificant result is caused by the large distance in the debt ratio. The minimum DER ratio in this study is 10% while the maximum ratio is 143.7%. This study uses 32 observational data with different debt ratios but still pays dividends, for example Alkindo Naratama Tbk (1.8%), and Indospring Tbk. (109%) which in 2020 both have a DER of 10%. This research is in line with (Rahmawati, 2018), which states that the company's debt has no direct effect on dividend policy. This research is also supported by previous research by (Indriani, 2019), which states that there is an insignificant relationship between debt to equity ratio and dividend payout ratio, explaining that companies with large debt ratios have a high risk, because the amount of debt exceeds equity. Companies that bear high risk have the motivation to expand in business, so that

the existing funds will be focused on financing their business operations, and not used to pay dividends.

Negative effect means that if sales growth increases, the proportion of dividend payments will decrease. The decision to pay dividends is made when the company discusses and decides on its financial and investment plans. The greater the proportion of dividends paid to shareholders, the greater the reduction in the proportion of profits that will be used to finance investment and business expansion. This research is in line with Indriani,(2019) and (Handayani, 2021) which state that *Sales Growth* has a negative and significant effect on dividend policy.theory *signaling* which states that outside investors will get a signal about the company's prospects in the future, through dividend payments. In line with Tinungki's research results (Setiawan, 2021) also state that manufacturing companies that have greater sales growth tend to pay more dividends.

Age does not have a partial significant effect on dividend policy. The increasing age of the company does not affect the increase or decrease in the dividend payout ratio. Investors in evaluating the value of the company do not use the age of the company as an important fundamental factor, this also confirms the view of investors that relatively older or younger companies are both considered to have professional abilities in increasing the value of their companies (Lambey, 2021). The results of this study are in line with (Ikhsan, 2021), that even though the company has been around for a long time and is in the mature phase or a company that has not been established for a long time and is in a development phase, it does not directly affect the dividend payment policy. However, the results of this study are not in accordance with the results of research conducted by (Tinungki, 2022), which states that there is a positive and significant effect of company age on dividend policy.

CONCLUSIONS AND RECOMMENDATIONS
Based on the analysis result, determinant of dividend policy in developing board index from 2018-2021. The research is done to examine the impact of ROA, debt, sales growth, firm age, on dividend policy (dividend payout ratio). From the results of this study, it was found that ROA has a positive and significant impact on dividend payment ratio. Sales Growth has a negative and significant effect on dividend payment ratio. While Der and Age of company has no significant effect on dividend payment ratio.

The author's recommendation in this study is that it is necessary to do further research by developing and adding other independent variables such as ROI, Current Ratio in order to determine whether there are variables that significantly theoretical effect on the dividend of development index companies.

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