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Analysis of Interdependence Relationship Between Investment Decisions, Financing Decisions and Dividend Decisions on Manufacturing Companies in Indonesia Stock Exchange Period 2010-2017

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Abstract: The study aims to analyze the interdependence relationship between investment decisions, financing decisions, and dividend decisions. The objects are the manufacturing companies continuously listing on the Indonesia Stock Exchange (BEI) for the period 2010-2017, selected using the purposive sampling technique. 30 companies were selected for analysis, with a total of 720 data observed. Secondary data is obtained from financial statements through documentation methods, and analyzed using the Two-Stage Least Square Analysis (2SLS) method. The results showed there is no interdependence relationship between investment decisions and financing decisions, no interdependence relationship between investment decisions and dividend decisions, and no interdependence relationship between financing decisions and dividend decisions.

Keywords: Investment Decision, Financing Decision, Dividend Decision, Interdependence.

INTRODUCTION

Firm value describes the level of public trust or appreciation for a company based on its achievements in contributing to the community and other stakeholders [1] [2]. The high firm value also shows the higher level of prosperity felt by the shareholders of the company, so that the achievement of high corporate value becomes a priority for them [3] [4].

This study focuses on manufacturing companies listed on the Indonesia Stock Exchange (IDX). The phenomenon related to the magnitude of the contribution of the manufacturing sector to national economic growth is indicated by the results of the BAPPENAS study, quoted by SindoNews media on April 17, 2018, that in 2018 Indonesia's economic growth has the potential to rise to a maximum of 5.5% [5]. The basis of the results of the study, as stated by the Minister of National Development Planning/Head of the National Development Planning Agency (BAPPENAS), Mr. Bambang Brodjonegoro, in Jakarta dated April 17, 2018, Indonesia's economic growth which is only a maximum of 5.5% is due to the lack of breakthroughs in the manufacturing sector; so the sector has not shown its role in bringing the Indonesian economy higher [5]. The decline in performance is seen to reflect the decline in the firm value from companies in the manufacturing sector on the IDX.

The financial management is aimed at maximizing firm value, in which a manager must complete three important decision groups, namely investment decisions, financing decisions and dividend decisions [6]. In Qureshi's opinion (2006), a combination of the right decisions for all three would maximize the value of the company [7]. The three groups of decisions are considered to be interrelated with each other, so that the managers must pay attention to the joint impact of the three decisions on the firm value, which indicated by the company's stock market prices [8] [9].

The problem analyzed in this study is how the interdependence relationship between investment decisions, financing decisions, and dividend decisions. The framework used in this study is the pecking

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order theory, which explains that funding is based on the order of funding preferences that have the least risk, namely retained earnings, debt and equity issuance [10]. The theory also states that companies tend to like internal financing rather than external funding (external financing) [11]. This theory is related to an indication of a company to issue a debt decision or a dividend decision to increase capital capitalization. The value of the company will also experience problems if the dividends paid are very low. This theory does not target the standard of debt to equity ratio, because between capital itself and externally varies greatly; own capital is preferred over own capital from outside the company.

RELATED STUDIES AND HYPOTHESIS

Some of the results of previous studies found that there were conditions in which one or both directions of reciprocal relationships between pairs of the three variables were insignificant. A number of researchers found empirically that partially there was no significant influence between investment decisions and funding decisions [12] [13] [14] [15] [16] [17]. Other researchers have obtained empirically that partially there is no significant influence between investment decisions and dividend decisions [13] [18] [14] [16] [17]. In addition, several other researchers found that partially there is no significant influence between funding decisions and dividend decisions [13] [18] [14] [15] [16].

Based on the results of those previous studies, it was argued that between investment decisions, funding decisions and dividend decisions, empirically have a weak or insignificant influence on each other. Thus, in this study hypothesized there is no interdependence relationship between investment decisions, funding decisions, and dividend decisions. In other words, all three types of decisions or policies can be used as exogenous variables on the value of companies that are separated from each other.

METHOD

This explanatory research analyzes the existence of an interdependence relationship between investment decisions, funding decisions, and dividend decisions. The objects are the manufacturing companies continuously listing on the Indonesia Stock Exchange (BEI) for the period 2010-2017. 30 companies were selected using purposive sampling technique [19] [20], with a total of 240 observed data. The basis of the selection uses several criteria, namely: (a) continuously listed on the IDX since 2010 to date; (b) regularly publish financial statements during the study period; and, (c) must distribute dividends during the study period.

Secondary data as the main data of this study were obtained from the financial statements of each sample company, using documentation methods [21] [20]. Secondary data is obtained from the IDX website, namely: www.idx.co.id.

Three dependent variables in this study are investment decisions, financing decisions, and dividend decisions. Investment decisions are measured using the Capital Addition to Asset ratio of Book Value Ratio (CAP/BVA), which is a ratio that shows the existence of additional flow of productive assets and at the same time shows the potential growth of the company [22] [23]. Financing decisions are measured using Debt to Equity Ratio (DER), which is the ratio that shows the balance or proportion of the total debt to the total equity or own capital owned or managed by the company [24] [25] [2]. Dividend decisions are measured using measured Dividend Payout Ratio (DPR), which is a ratio that shows the proportion of the amount of profit shared by management in the form of dividends to shareholders and the value of retained earnings as a source of corporate own funding [26] [23] [27].

Data is analyzed using the Two-Stage Least Square Analysis (2SLS) method, which is run through two stages [28] [13]. The first stage, we calculated the value of the variables studied, namely investment decisions, financing decisions and dividend decisions, for each company during the study period based on the operational definitions described. Next, the determination of the simultaneous equation model which is used to test the interdependence relationship between the three dependent and instrumental variables using the existing formula. Regression equations in this study are:

$$DPR = \alpha 1 + \beta 1\ CAPBVA + \beta 2\ DER + \square 1 \quad (1)$$

$$CAPBVA = \alpha 2 + \beta 3\ DPR + \beta 4\ DER + \square 2 \quad (2)$$

$$DER = \alpha 3 + \beta 5\ CAPBVA + \beta 6\ DPR + \square 3 \quad (3)$$

where DPR is dividend decisions in the form of Dividend Payout Ratio; CAPBVA is investment decisions in the form of CAP/BVA; anda DER is financing decisions in the form of Debt Equity Ratio.

Hypothesis testing was conducted to determine the interdependence relationships between investment decisions, financing decisions and dividend decisions, based on the three simultaneous

regression coefficients of equations [15] [28] [14]. The results obtained are said to be significant if the value of Sig. t or Sig. F is smaller than 0.05. The degree of significance between pairs of dependent variables is determined from the results of the 2SLS test by looking at the significance values of the two directions. For example, the degree of significance of the interdependence relationships between financing decisions and dividend decisions is obtained by comparing the significant values of financing decisions on dividend decision equation models (or, equation 1 about DPR) and also looking at the significant values of dividend decisions in the financing decisions equation model (or, equation 3 about DER). If the results of both directions show a significant effect, it means that there is an interdependence relationship between the two; or vice versa.

RESULTS

Tests regarding the existence of an interdependence relationship between investment decisions, financing decisions and dividend decisions, are conducted through the 2SLS analysis method using SPSS for Windows version 21. Test results are summarized in Tables 1 to 3.

Table 1: 2SLS Test Results with Dividend Decisions (DPR) as Dependent Variable

		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
Equation 1	(Constant)	-,083	,418		-,200	,842
	RasioCAPBVA	4,512	5,336	,055	,846	,399
	DebttoEquityRatioDER	-,001	,031	-,002	-,034	,973

R2 = 0,003 ; F = 0,361 (p = 0,697)

The test results for equation (1) with dividend decisions (DPR) as dependent variable, showed the combined contribution of investment decisions (CAP/BVA) and funding decisions (DER) of 0.3% are not significant (p > 0.05). This result means that changes in dividend decisions in manufacturing companies cannot be explained directly by the changes of investment decisions and funding decisions. Testing of the partial effect of each variable on dividend decisions also shows insignificant results, which are strengthening or expanding the similar findings of previous studies [13] [14] [15] [16] [17] [18]. The positive coefficient of 4.512 (p > 0.05) of investment decisions on dividend decisions provides an interpretation that an increase in investment decisions will not always increase dividend decisions. The negative coefficient of -0.001 (p > 0,05) from the funding decision on dividend decisions gives an interpretation that the increase in funding decisions will not always decrease the dividend decisions.

Table 2: 2SLS Test Results with Investment Decisions (CAPBVA) as Dependent Variable

		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
Equation 1	(Constant)	,04565	,00412		11,077	,000
	DebttoEquityRatioDER	-,00032	,00037	-,056	-,871	,385
	DividendPayoutRatioDPR	,00067	,00079	,055	,846	,399

R2 = 0,006 ; F = 0,740 (p = 0,478)

The test results on equation (2) with investment decisions (CAPBVA) as dependent variable, showed the combined contributions of financing decisions (DER) and dividend decisions (DPR) of 0.6% are not significant (p > 0.05). This result means that changes in investment decisions in manufacturing companies cannot be explained directly by the changes of financing decisions and dividend decisions. Testing for the partial effect of each variable on investment decisions also shows insignificant results, which are strengthening or expanding the similar findings of previous studies [12] [13] [14] [15] [16] [17] [18]. The negative coefficient of -0.00032 (p > 0,05) from the financing decisions on investment decisions provides an interpretation that the increase in financing decisions will not always reduce investment decisions. The positive coefficient of 0.00067 (p > 0.05) from the dividend decision on

investment decisions provides an interpretation that the increase in dividend decisions will not always increase investment decisions.

The test results on equation (3) with financing decisions (DER) as dependent variable, showed the combined contributions from dividend decisions (DPR) and investment decisions (CAPBVA) of 0.3% are not significant (p > 0.05). This result means that changes in financing decisions in manufacturing companies cannot be explained directly by the changes of dividend decisions and investment decisions. Tests on the partial effect of each variable on financing decisions also show insignificant results, which are strengthening or expanding the similar findings of previous studies [12] [13] [14] [15] [16] [17] [18]. The negative coefficient of -0.005 (p > 0.05) from the dividend decision on financing decisions gives an interpretation that the increase in dividend decisions will not always decrease financing decisions. The negative coefficient of -9.869 (p > 0.05) from the investment decision on financing decisions gives an interpretation that the increase in investment decisions will not always decrease financing decisions.

Table 3:2SLS Test Results with Financing Decisions (DER) as Dependent Variable

		Unstandardized Coefficients		Beta	T	Sig.
		B	Std. Error			
Equation 1	(Constant)	1,912	,879		2,176	,031
	DividendPayoutRatioDPR	-,005	,138	-,002	-,034	,973
	RasioCAPBVA	-9,869	11,337	-,057	-,871	,385

R2 = 0,003 ; F = 0,382 (p=0,683)

Finally, the test results of the three regression equations used in this study provide clarification that there are no interdependence relationships between the variables under study. Thus, changes that occur in investment decisions, financing decisions and dividend decisions, can be caused by other variables not included in this research model.

CONCLUSION

Based on the analysis results, it is concluded that there are no interdependence relationship between investment decisions and financing decisions, no interdependence relationship between investment decisions and dividend decisions, and no interdependence relationship between financing decisions and dividend decisions, in companies listed in the sector manufacturing on IDX.

This study, however, is considered to still have some limitations that require further revision of subsequent researchers. The first limitation is that this study only uses objects in manufacturing companies, so it does not reflect the conditions of all companies listed on IDX. The second limitation is that this study only uses a time span of 8 years, which is relatively short to assess the phenomenon of interdependence relationships between investment decisions, financing decisions and dividend decisions among listed companies on IDX.

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