

Investment Decision : The Case of Indonesian Manufacturing Companies

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ABSTRACT

The purpose of this paper was to examine the determinant of investment among companies in consumption goods sector listed on the Indonesia Stock Exchange (IDX) during the period of 2014-2017, with the sample as many as 100 companies. The investment decision was measured by nett investment. The authors used the random effects to test the variables that were associated with investment. This research found out that sales had positive effect on investment, while the leverage and growth opportunity did not. The research findings indicated that high sales were a positive signal to stakeholders, that the company had high performance as well as high investment in assets.

Keywords: *Investment, sales, leverage, growth opportunity*

1. INTRODUCTION

Companies must allocate their funds for investment wisely and efficiently. It becomes an absolute thing to do when they make investment decisions. Companies must consider everything when making such decisions in order to get optimum results. The changing business environment is very fast and rapid competition causes companies to take this step [1].

Companies need funds from external parties to finance their other needs. The use of external funds is more expensive compared to that of internal funds. This can cause the company's growth to decrease [2]. [3] stated that leverage harms investment. This is due to agency conflicts between shareholders and bondholders. [4], [5], and [6], [7], [8], [9] stated that leverage has a negative influence on corporate investment. Companies that have low leverage, have high free cash flow to do big investment. Research conducted by [10] explained that leverage and debt maturity have positive effect on investment. [11] stated in his research that leverage can have a positive or negative effect on firm investment due to under-investment or overinvestment.

Companies having high growth can easily get funds compared to those having low growth. Companies with low growth find it difficult to get funds from external parties because of the growing information asymmetry. This causes companies with low growth to have lower cash.

High sales occurs by enlarging the scale of the company. In general, companies issue debt to expand their scale. Thus, there is a relationship between sales and investment. Several studies had presented the negative relationship between leverage and corporate investment decisions, for example : [7], [8] and [9]. [12] explained that leverage influences firm investment. [13] in their research explained that there was significant influence of leverage on firm investment in companies with low growth. But the results of his research showed that leverage has no significant effect on firm investment in companies having high growth. [14] in his

research explained that there is significant effect of leverage on firm investment in small companies, but leverage does not affect large companies. Research conducted by [10] explained that leverage and debt maturity has a positive relationship with the investment. [14], [15] explained that there is a significant effect of sales on firm investment. [16] explained that sales does not influence firm investment.

The problem of this research is whether leverage, growth opportunity, and sales influence the investment decisions. The purpose of this study was to analyze the effect of those three variables on investment decisions. This research provides benefits for investors to take the right investment decisions in terms of choosing a company that will benefit in the future. For creditors, this research contributes in the way so that they could see the company's ability to repay its debt. For managers, this research is useful so that they can use existing resources in the company for investment activities that earn profits in the future.

2. LITERATURE REVIEW

2.1 Agency Theory

Agency theory was initially stated by [17], which was developed theoretically by [18]. [18] stated that company managers are the agents and principals are the shareholders. [19] explained that this agency relationship creates two problems, namely the asymmetry of information and the conflict of interest due to the differences in objectives. The conflicts of interest between agents and principals occur because of an inequality of purpose. The manager does not always act in the interests of the owner. This can lead to agency costs that must be borne by the principal and agent. Principals and agents are trying to reduce the agency costs. [20] explain that agency problems lead to investment inefficiency due to financing constraints.

[21] explained that agency theory has two forms that have evolved, namely the positivist theory agenda and the agency theory related to the principal-agent relationship. Positive Agency theory adopted by positivism researchers emphasizes the principal-agent relationship between the owners and managers of public companies exclusively [22]. Positive accounting theory [23] explains that there are three hypotheses in the agency theory, namely the bonus plan hypothesis, the debt/equity hypothesis, and the political cost hypothesis. [18] explained the relationship between principals and agents based on utility maximization. These result in why the agents do not always act in the best interests of the principals. [24] explained that an agent's decision depends not only on the agent him/herself, but also on the incentives offered to the agent. This causes an agency conflict.

2.2 Information Asymmetry Theory

If the information is complete and available to all players in the capital market, then any desired investment project can be financed. Lenders can receive good information about the company, but sometimes they incur expensive costs to check for the information. This is because they are outsiders of the company. This happens because information about loan quality is special / exclusive for certain companies. [25] argued that the separation between principals and agents makes asymmetrical information. [26] stated that information has a fundamental effect on the functioning of capital markets. If a company has enough cash flow from the its operations to finance the investment, then the company can avoid external capital market. This shows that the availability of internal financing increases the company's ability to invest.

2.3 Signalling Theory

[25] gave another reason that explains the relationship between internal finance and investment. They showed that asymmetric information about a company's investment project can cause conflicts of interest between the agents and principals. Externally financed investment causes the company to release the desired investment project. The company has access to internal funds and they eliminated the conflict of interest. Then the company will take all projects with a positive NPV. This theory predicts a positive relationship between internal finance and investment. The company's internal finance and interest expense are significant determinants of investment that happen under the information asymmetry. Internal finance and interest expense limit the investment directly to the company's cost of capital. Asymmetric information prevents companies from making all the investments they want.

2.4 Leverage, Growth Opportunity, Sales, and Investment

Leverage is one source of corporate funding to finance the investment activities. Companies use the leverage to invest in various assets. Leverage is measured by using the debt-to-assets ratio. The higher the leverage is, the higher the risk borne by the company will be, as well as the greater the level of profit. The use of leverage in corporate investment and financing makes creditors receive a fixed rate of return on debt. Investors will also continue to earn profit if the business runs smoothly [27]. Debt to Total Assets' Ratio (DAR) is a ratio that calculates a company's solvency level. This ratio reflects the company's ability to meet its long-term obligations.

Growth opportunity shows the company's opportunity to grow in the future. A company with high growth rate needs large funds for investment activities in fixed assets. The company must provide sufficient funds to finance its operating activities. A company with low growth rate requires larger funds than that with high growth rate. This company will use bigger debt in order to grow and develop. Tobin's Q ratio measures the growth opportunity. Companies with high Tobin's Q shows good financial potential. This shows that the company has increased profitability or reduced cost of capital. This can increase the investment opportunities possessed by the company. High Tobin's Q shows high growth opportunities of a company with profitable investment potential.

Sales is the revenue received by a company during a certain period. A company that has greater level of sales shows higher company's performance. Such high performance has a positive impact on investment. The investment will provide high return. A company having high level of sales can make investors optimistic about the returns. Sales become one of the factors used to measure the company's growth opportunity [28]. A company having high level of sales shows that it has high growth opportunity. Investment is investing in one or more assets for a long time. A company invests in order to get profit in the future. Investment is the current consumption delay, which buys productive assets for a certain period. Investment is a commitment to a number of funds or other resources made at this time, with the aim of obtaining future profits. Investment has a relationship with funding. Companies that do not have internal funds, will use external funds for investment. Investment is a means of issuing certain funds with the aim of generating revenue and increasing company value.

2.5 Hypotheses

A company uses leverage to finance its activities and bears the fixed costs for increasing profits. The higher the level of leverage, the more the company will invest, and the higher the interest will be paid. The rate of return on investment can cover the higher fixed interest expense. [29] stated that leverage has positive influence on investment. The higher

the leverage, the higher the investment will be. This will lower the level of financial risk, because investment returns can cut the cost of debt repayment. [14] research showed that there is positive influence of leverage on corporate investment. Therefore, the hypothesis of this study can be developed as follows:

H_{a1} : Leverage has a positive effect on investment

A company with high growth rate can cut the information asymmetry that occurs. This company gets funds from external parties. Companies with low growth opportunities face financial constraints to get the funds [30]. [30] found a significant relationship between growth opportunities and company investment among the companies with high growth rate, but the result is not the same for those with low growth opportunities. The investment made by the company is a measure for investors that the company will grow in the future. The lower the growth rate, the smaller the company's investment in fixed assets will be. The higher the growth rate, the more investment the company will make [28]. High corporate investment activities due to the high level of growth opportunity offer the opportunities for companies to make the right decisions in the future. Therefore, the hypothesis of this study can be developed as follows:

H_{a2} : Growth opportunity has a positive effect on investment

Sales shows the level of sensitivity of an investment. Stable sales show that the company has good cash flow for investment. Companies with stable levels of sales have more funds than debt and bear a greater burden when being compared to those whose sales are unstable. The funds obtained are used for investment activities. Companies

having high sales means that they can get big profit from it. The profit is used as internal funds to be invested in fixed assets. The higher sales growth can enlarge the company's scale. Most companies make investments to expand their scale. [31] stated that sales influence the investment. If sales increase, then investment also increases. Sales help investors to see the state of the company. [15] explained that if sales increase, company investment increases. Therefore the hypothesis of this study can be developed as follows:

H_{a3} : Sales has a positive effect on investment

3. RESEARCH METHODOLOGY

Samples were selected by using non-probability method with judgment sampling techniques for observation, and the result was 100 companies that had been collected from Indonesia Stock Exchange (IDX) especially in the consumption goods sector during the period of 2014–2017. In order to avoid the outliers, we winsorized the data at 5% level.

This study used Eviews6 to determine the research model, then performed a descriptive statistical test in order to test the sample data, and then proceeded with a multicollinearity and heteroscedasticity test. Meanwhile, several tests were also conducted, such as the hypothesis testing used the t-test, F-test, and the Coefficient of Determination (Adjusted R²).

Our regression model is specified as follows:

$$INV_{it} = \alpha + \beta_1 * Leverage_{it} + \beta_2 * Q_{it} + \beta_3 * Sales_{it} + \epsilon_{it} \quad (1)$$

The operationalization of the variables used in this study can be seen in Table 1 below.

Table 1

Measurement of Variables

Variables	Measurement
INV	$INV_{it} = \frac{Capital\ Expenditure - Depreciation}{Net\ Fixed\ Asset}$
Leverage	$Leverage = \frac{Total\ Liabilities}{Total\ Assets}$
Q	$Q_{it} = \frac{MV\ Equity + BV\ Liabilities}{Book\ value\ of\ Total\ Assets}$
Sales	$Sales_{it} = \frac{Net\ Sales}{Net\ Fixed\ Asset}$

This research used the random effects estimator in order to control the individual firm effects in the estimation. The random effects analysis is relevant in this research since all the explanatory variables are entered into the regression.

4. RESULTS AND DISCUSSION

Table 2

Descriptive Statistic of the Variables

Variables	Mean	Median	Maximum	Minimum
INV	0.293973	0.203431	2.085337	0.000391
Leverage	0.432332	0.379409	2.088437	0.066187
Q	4.821046	2.984084	23.28575	0.627623
Sales	5.677981	3.753214	41.98735	0.459182

Table 3
Correlation Matrix

	Leverage	Q	Sales
Leverage	1	0.052774	0.016667
Q	0.052774	1	0.429069
Sales	0.016667	0.429069	1

Table 4
Empirical Result of the Impact of Leverage, Growth Opportunity, and Sales on Investment

Variable	Coeff	p-value
C	0.027097	0.7544
Leverage	0.059524	0.6450
Q	-0.004529	0.6683
Sales	0.038919	0.0000
R-squared	0.342496	
Adjusted R-squared	0.321949	
F-statistic	16.66889	
Prob(F-statistic)	0.000000	
Firms Random Effects	Yes	
Obs	100	

Table 4 reports the regression results from the effect of leverage, growth opportunity, and sales on investment. We found a positive but not significant effect of leverage on investment. Growth opportunity had a negative but not significant effect on investment. On contrast, there was a positive and significant effect of sales on investment.

The higher the level of corporate leverage, the greater the company conducts the investment activities. Managers, as agents who manage the company, will use the leverage from external parties to invest in fixed assets. The use of higher leverage means that the agents must pay even higher fixed interest expenses to creditors. Managers prioritize the interests of paying leverage and fixed expenses to the creditors, but not sharing the profits to them. Managers do not pay attention to the interests of investors, which will result in the agency conflicts between investors and managers. To avoid the greater agency conflict between investors and managers, and higher agency costs, managers will control the company's investment activities.

Managers control the investment activities on fixed assets by selecting the activities that can generate a certain rate of return. The rate of return on investment in fixed assets can cover the fixed costs due to the use of leverage. The return on investment can control the behavior of managers in making excessive investments in fixed assets. The increased leverage can mitigate the overinvestment conflicts. Managers must manage and replace the strategies that are too aggressive in investing.

The higher the company's leverage becomes a signal for investors that the company must pay-off the leverage and fixed-interest expenses in that period. This makes investors conduct the extensive supervision of investment actions taken by the managers. Investors will oversee the company's investment activities, which can increase the company's revenue. They also want the increase in income in order to prosper their welfare. They hope that they will get it in form of dividends.

The results of this study are the same as those from the research conducted by [14], which stated that there is a positive but not significant effect of leverage on investment. The results of this study differ from those of [32], [30], [8] who found out that there was a negative relationship between leverage and investment. The results of this study also showed that growth opportunity had a negative but not significant effect on investment. The higher the growth opportunity is, the lower the level of company investment will be. A company with high growth opportunities tends easier to get external fund from creditors. This is because the company can give a positive signal to outsiders about its ever-increasing growth. The greater the fund from external parties means that the company has to pay more fund and interest on time. This will make the company limit its investment activities on fixed assets. Thus, the company will focus more on paying off its debt by increasing its performance in order to generate large revenues.

A company with high growth or high Tobin's Q value means that it has more debt than the one with low Tobin's Q value. This causes the company to limit its investment activities. A company with high debt must pay its debt on time, so it will cut the investment activities in fixed assets. The lower the company's growth rate is, the higher the company's investment will be. A company with low growth, which has low Tobin's Q value, indicates that it has low debt. The company will try to get external fund to finance its investment activities. They will give large profit to the company. The low amount of corporate debt gives signal to outsiders that the company has fulfilled its debt contract commitments with creditors on time. The creditors will provide more loans to the company. Additional funds from these creditors may increase the investment in fixed assets. Investment in fixed assets supports and enhances the company's operational activities, so that the contractual commitments with creditors can be fulfilled.

This research provides the same result as the one conducted by [33] and [31], which stated that growth opportunities

have a negative but not significant effect on firm investment. However, this research does not the same result as the research of [34], [16], [10], who found out that there is a positive and significant effect of growth opportunities on firm's investment.

Sales has positive effect on firm's investment. A company with high sales shows that it gets high profit. High profit is a source of internal fund for the company to invest in fixed assets. Sales is one indicator for investors to invest in the company. High sales gives a positive signal to stakeholders that the company has high performance. Investment in fixed assets is done by the company to increase its operational activities in the future, so that it will get higher future profit. Sales is the result of the income received by the company for one or more periods. Increased sales shows good company's performance and has positive impact on investment. Investments in fixed assets will increase the return. A company that has greater level of sales, can make investors become optimistic about their stock return. Sales is one among the factors used to measure the growth opportunity [28]. A company with high sales growth means that it has high growth opportunity. This also means that the company has good and profitable investment potential. Stable sales gives a positive signal to investors to invest their fund in it. Sales is closely related to the rate of return on the investment made by the company in fixed assets. Investment in fixed assets will increase the company's productivity in sales.

5. CONCLUSION

This research found a positive but not significant effect of leverage on investment. Growth opportunity had a negative but not significant effect on investment. There was a positive and significant effect of sales on investment. The high company's leverage becomes a signal for investors that the company must pay-off its leverage and fixed-interest in that period. This urges the investors to conduct extensive supervision of investment actions taken by the managers. Investors will oversee the company's investment activities, which can increase the company's revenue. They want the increase the income in order to prosper their welfare. They hope that they can get it in form of dividends. The low amount of corporate debt gives a signal to outsiders that the company has fulfilled its debt contract commitments with creditors on time. The creditors in return will provide more loans to the company. Additional fund from these creditors may increase the investment in fixed assets. This kind of investment can support and enhance the company's operational activities, so that contractual commitments with the creditors can be fulfilled.

A company with high sales shows that it gets high profit. High profit becomes a source of internal fund for the company to invest in fixed assets. Sales is one indicator for investors to invest in the company. High sales is a positive signal for stakeholders to see about the company's performance. High sales gives a positive signal to stakeholders that the company has high performance. Future studies can use cash flow, firm size, profitability, and

debt maturity as other variables that affect the company's investment, by using the sample of companies in mining sector as well as expanding the period of observation.

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