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The Effect of Economic Determinants on Capital Structure with Market Conditions as a Control Variable (Case Study of IDX-Listed LQ 45 Manufacturing Company in 2015-2019)

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ABSTRACT

This study was conducted to examine the effect of economic determinants on Capital Structure as measured by Profitability, Company Size, Company Growth, Asset Structure, Liquidity, Effective Tax Rate, Business Risk in LQ 45 Manufacturing Companies Listed on the IDX in the 2015 – 2019 Period. Used in this study was obtained from the Annual Report published to the public, either through the Indonesia Stock Exchange or the company's website. The sampling technique used is purposive sampling with a total sample of 135 samples. The data analysis technique used in this study is multiple linear regression analysis. Previously, the data has been tested with classical assumption testing, including descriptive analysis, chow test, Hausman test, LM test, data normality, heteroscedasticity, multicollinearity, and autocorrelation. During the observation period, it was shown that the research data were normally distributed. Based on the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test, no variables deviated from the classical assumptions. This shows that the available data has met the requirements using the multiple linear regression equation models. This study indicates that the variables of Company Size, Company Growth, Effective Tax Rate, and Business Risk do not show a significant effect on capital structure. Profitability, Asset Structure, and Liquidity variables significantly affect capital structure.

Introduction

Competitive competition with the increasing years in the era of globalization in the world and the sophistication of technology in this era, makes companies around the world have a goal to earn profits and increase company value (Damayanti, 2013). In addition, the company must have capital in order to live and develop its business so that it can finance all company operations.

In increasing the competitiveness of a company's economic growth rate, Indonesia must be able to overcome all challenges, due to the faster pace of economic growth in manufacturing companies in various sectors. In addition, companies must be required to be able to see the situation that will occur, this can reduce risk. Companies must also be able to carry out good management functions, namely in the fields of marketing, production, human resources, and finance so that the company's condition is healthy and superior in the competition faced in this era of globalization (World Bank).

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In the context of companies that want to develop their business, companies must require sufficient capital. In meeting capital, companies can obtain capital through funding activities, this is the main activity of the financial manager function (Sartono, 2010). The company's priority task to financial managers when making funding decisions or capital structure decisions, namely a financial decision related to the composition of debt that must be used by the company and will affect the company's operational activities to the risks found in the company. In addition, the type of funding chosen must influence the company's investment decisions (Brigham & Houston, 2006).

Capital structure can be measured by the level of Debt to Equity Ratio (DER) which is a comparison of the total debt owned by the company with its own capital. The greater the DER, the greater the risk that must be faced by the company, because the use of debt as a source of funding is much greater than its own capital (Fahmi, 2012).

The optimal corporate capital structure is a condition in which a company can use a combination of debt and equity ideally, which balances the value of the company and the cost of its capital structure. The optimal capital structure can change over time, which can affect weighted average cost of capital. Furthermore, changes in the cost of capital will affect capital budget decisions and will ultimately affect the company's stock price (Firnanti, 2011).

There are capital structure guidelines, one of which is the vertical capital structure guidelines. The guidelines for the vertical capital structure provide a ratio limit that must be maintained by a company regarding the amount of loan or debt capital with the amount of its own capital (Julita, 2013). Based on the assumption that healthy spending must initially be built on the basis of own capital, the capital structure guidelines stipulate that the amount of loan or debt capital in a company under any circumstances should not exceed the amount of its own capital (Nurmadi, 2013). The debt coefficient, which is the ratio between the amount of foreign capital or debt with own capital, must not exceed 1:1. In essence, the optimal capital structure must prioritize the interests of shareholders. Therefore, companies should fund their business with their own capital (YB & Bambang, 2010).

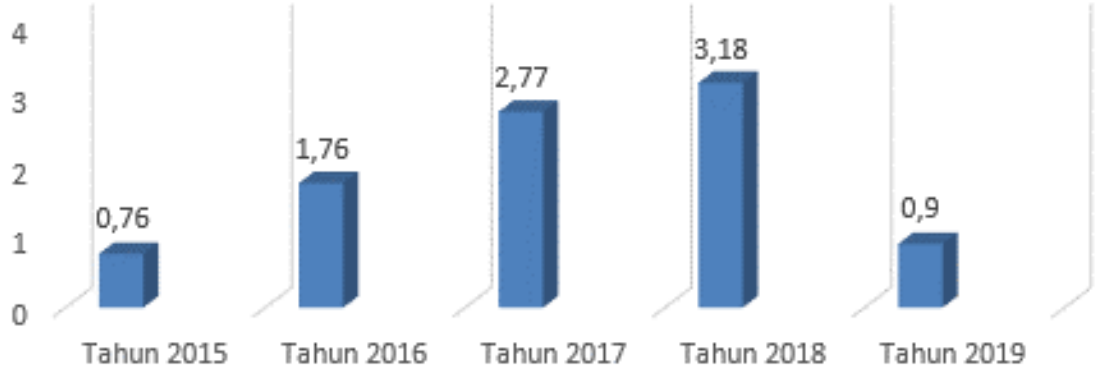


Figure 1
Movement of Debt Equity Ratio (DER) Value Increases from 2016-2018 in Manufacturing Companies on the Indonesia Stock Exchange for the 2015-2019 Period

In the picture above shows the DER value has increased from 2016 - 2018 manufacturing companies listed on the IDX are above one. The average debt to equity ratio for 2016 is 1.76%; in 2017 by 2.77%; and in 2018 it was 3.18%. Researchers Brigham and Houston (2011), suggest that if an organization that has a DER value exceeds the value of one, then the company uses corporate debt as its operational activity is greater than the amount of its own capital. "This is not in accordance with the theory of optimal capital structure, where the amount of debt should not exceed the company's own

capital". However, "many investors are more interested in companies that invest their capital in the form of investments in companies that have a DER whose value is less than one." (Listijowati, 2012).

Amiriyah and Andayani (2014) stated "The greater the capital structure ratio indicates the greater the number of long-term loans, which causes more part of operating profit to be used to pay fixed interest expenses, and more cash flow is used to pay loan installments. This will result in a decrease in the amount of net profit after tax that will be obtained by the company (Alipour, Mohammadi, & Derakhshan, 2015).

Many studies have analyzed the influence of various factors on capital structure, but the results of these studies have not shown consistent results. Based on this research, the researcher aims to select the factors that are considered dominant in influencing the capital structure. The factors that will be raised in this study to examine the effect of capital structure on these factors include: Profitability, company size, company growth, asset structure, liquidity, effective tax rate, and business risk with samples on the IDX in 2015-2019 in Manufacturing companies.

In general, investors who are long-term oriented are not so affected by market issues, because they have carried out a fundamental analysis of the company chosen to invest. in contrast to investors who are short-term oriented. Short-term oriented investors tend to follow market trends, when stock prices decline, investors decide to buy, and when stock prices are high, investors decide to sell the shares. Behavioral finance is the application of psychology to financial decision making and financial markets. Behavioral finance is also a transformation of the financial paradigm with a psychologically based framework (Shefrin, 2010). According to Statman (1999) quoted by Chandra (2012)

According to Kole and Dijk (2010) in Ramadhan (2016), in the financial market that many investors have the same expectations, at the same time, on future prices and yields. of that perception. Bullish is an up market condition characterized by positive (high) market returns. On the other hand, bearish is a downward market condition marked by negative (low) market returns. in the Composite Stock Price Index in 2013-2015 already includes bullish and bearish market conditions.

Method

Population and Sample

The research object population is the LQ 45 Manufacturing company listed on the IDX according to those circulated on IDX. The object of this research uses LQ 45 Manufacturing companies where the total LQ 45 Manufacturing companies are 135. The sample selected is LQ 45 Manufacturing companies, because the IDX has the most Manufacturing companies. While the sample is part of the members of the object under study. Purposive sampling is a technique in sampling with the type of judgment sampling. What is meant by judgment sampling is a research that needs to be done first by considering a research objective or problem in which the research must be developed (Felicia & Saragih, 2015).

This research must have a characteristic which is different from previous research, namely:

1. LQ 45 Manufacturing Company according to IDX data for 2015-2019. In addition, the IDX recorded that it published complete financial reports from 2015-2019 in a row.
2. LQ 45 Manufacturing Company that always earns profit during the 2015-2019 period.

Criteria Companies have a number of samples in the study as many as 27 companies. Pooled data used in this study using 135 data observations (5 years x 27 companies).

Results And Discussion

A. Overview of the Samples Used

The sample used in this study is the LQ 45 Manufacturing Company for the 2015-2019 period on the condition that the company has a positive profit. Retrieval of data related to the data related to this research was obtained from the IDX website, namely www.idx.co.id. Details of the number of sample companies required are 27 companies that have previously been observed with data specifications.

Table 1
Sample Details

Information	
LQ 45 Manufacturing Company listed on IDX 2015-2019	135
Sample	27
5 years sample = 5 x 27	135

Source: IDX processed by researchers (2021)

Based on the sample details in table 4.1 for the 2015-2019 period, from the data that the author studied, it was obtained as many as 27 x 5 = 135 LQ 45 manufacturing companies.

B. Data Test Results

1. Descriptive Statistical Analysis

The following is a descriptive statistical analysis on a sample of LQ 45 Manufacturing companies in each year.

X1_DER	X2_ROA	X3_SIZE	X4_SAGR	X5_SA	X6_WCR	X7_ETR	Y_COND
1.891438	0.093653	18.01675	0.031643	0.265195	0.067172	0.261387	0.027319
0.974679	0.058533	17.93333	0.055471	0.246216	0.069877	0.249363	0.013101
11.39583	0.657855	20.98324	2.557146	1.000000	0.476512	1.000000	0.353655
0.135246	-0.006961	15.17374	-0.696754	1.31E-05	-2.969182	-0.793678	0.001398
1.997509	0.108346	1.474015	0.385344	0.213404	0.324166	0.193922	0.047733
1.910073	2.464308	0.345488	2.031821	0.796932	-6.077380	0.779715	5.099028
7.608784	10.01628	2.440826	15.64901	3.076502	58.19404	14.86521	32.87454
201.5685	413.5467	4.444448	992.8723	14.32269	17966.93	805.5849	5605.247
0.000000	0.000000	0.108368	0.000000	0.000776	0.000000	0.000000	0.000000
255.3442	12.64310	2432.262	4.271760	35.80134	9.068172	35.28728	3.688050
534.6656	1.573013	291.1446	19.89767	6.102542	14.08121	5.039173	0.305316
135	135	135	135	135	135	135	135

Figure 1
Descriptive Statistics of Variables
Source: Processed secondary eviews data (2021)

2. Chow Test (Chow Test)

Redundant Fixed Effects or Likelihood ratio (Chow Test). Chow test is used to determine whether the selected model is pooled least square or fixed effects. H0 is rejected if the value of the probability F is less than alpha, which is less than 0.05, where H0 is the pooled least squares model and H1 is the fixed effects model. If the prob value. Cross-section chi-square <0.05 then we will choose a fixed effect.

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.869038	(26,101)	0.6486
Cross-section Chi-square	27.255073	26	0.3961

Figure 2
Chow Test (Chow Test)

Hypothesis:
H0 : Common Effects
H1 : Fixed Effects
The results of the redundant fixed effect or likelihood ratio for this model have a probability value of F of 0.6486 which is greater than alpha 0.05, so that H0 is accepted and H1 is rejected, the appropriate model from this result is common effects.

3. Hausman Test (Hausman Test)

The Hausman test is a test used to see whether fixed effects or random effects are the best method. If the Hausman test accepts H1 or p value <0.05, the method we choose is fixed effect.

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.555909	7	0.3734

Output Interpretation:
Hypothesis:
H0 : The model follows random effects
H1 : The model follows the fixed effects

Based on the results of the Hausman test showing a significance value of 0.3734 (significance > 0.05), then H0 is rejected and H1 is accepted, so it can be interpreted that the random effects model is better than the fixed effects model.

4. Langrange Multiplie (LM)

Langrange Multiplier (LM) is a test to determine whether the right model is used by random effects or common effects. This test was developed by Breusch Pagan. The Breusch Pagan method for the random effect significance test is based on the residual value of the OLS method.

If the p value is greater than 0.05 then accept H0 which means the best estimation method is the common effect.

5. Langrange Multiplie (LM)

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	0.628507 (0.4279)	0.068893 (0.7930)	0.697399 (0.4037)
Honda	-0.792784 (0.7860)	0.262474 (0.3965)	-0.374986 (0.6462)
King-Wu	-0.792784 (0.7860)	0.262474 (0.3965)	-0.045134 (0.5180)
Standardized Honda	-0.621852 (0.7330)	0.554746 (0.2895)	-4.495215 (1.0000)
Standardized King-Wu	-0.621852 (0.7330)	0.554746 (0.2895)	-3.004999 (0.9987)
Gourieroux, et al.	--	--	0.068893 (0.6380)

Output Interpretation:
Hypothesis:

H0 : Common Effects
H1 : Random Effects

The output results above show the Breush-Pagan (BP) probability value of 0.0000. The hypothesis is that if the Breush-Pagan (BP) probability is greater than alpha (0.0000 > 0.05) then H0 is rejected and H1 is accepted, so the correct model in the above results is random effects.

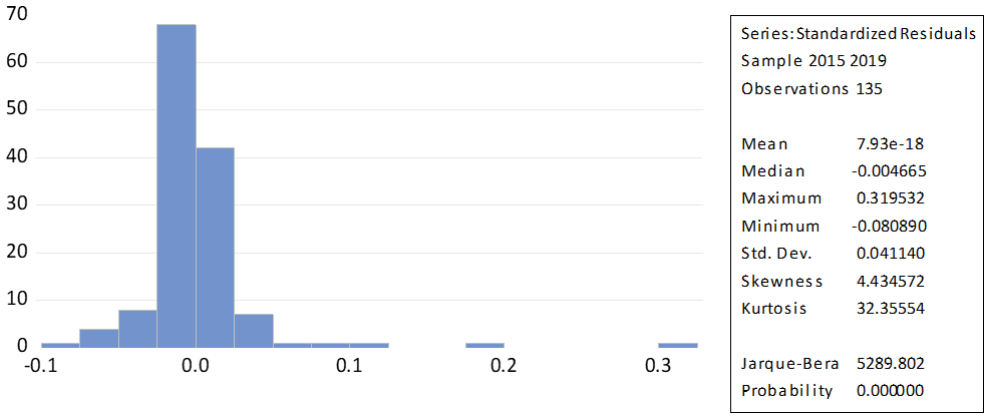
6. Normality test

"This study uses statistical analysis with the Kolmogorov-Smirnov test". Can be seen in Table 4 Variable Normality Test

Table 4
Variable Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		135
Normal Parameters[a]	Mean	.027
	Std. Deviation	.041
Most Extreme Differences	Absolute	.031
	Positive	.031
	Negative	-.080
Kolmogorov-Smirnov Z		3.688
Asymp. Sig. (2-tailed)		.000



Based on Table 4, it can be seen that the value of the Kolmogorov-Smirnov statistical test is 0.263 and is not significant which indicates the "Asymp Sig. (2-tailed) of 0.000 which is smaller than 0.05". Then the residual data with normal distribution is rejected,

which means the residual data is not normally distributed.

7. **Multicollinearity Test**

"Multicollinearity testing can be seen from the tolerance value and Variance Inflation Factor (VIF)".

8. **Multicollinearity Test with VIF**

Coefficientsa

	Y_COND	X1_ROA	X2_SIZE	X3_SAGR	X4_SA	X5_WCTA	X6_ETR	X7_RISK
Y_COND	1.000000	-0.163018	0.440574	-0.203430	-0.215912	0.239058	0.023217	-0.005722
X1_ROA	-0.163018	1.000000	-0.256555	0.593188	0.330486	-0.552646	-0.293811	0.155254
X2_SIZE	0.440574	-0.256555	1.000000	-0.509156	-0.003283	0.251113	0.053656	-0.061029
X3_SAGR	-0.203430	0.593188	-0.509156	1.000000	0.181965	-0.329756	-0.186330	0.239868
X4_SA	-0.215912	0.330486	-0.003283	0.181965	1.000000	-0.230203	-0.150410	0.013990
X5_WCTA	0.239058	-0.552646	0.251113	-0.329756	-0.230203	1.000000	0.183554	-0.080434
X6_ETR	0.023217	-0.293811	0.053656	-0.186330	-0.150410	0.183554	1.000000	-0.019055
X7_RISK	-0.005722	0.155254	-0.061029	0.239868	0.013990	-0.080434	-0.019055	1.000000

Figure 4
Source: Eviews 11 secondary data processed in 2021

Based on table 5, the results of the calculation of the tolerance value produce no independent variables whose tolerance value is less than 0.10, which means that there is no correlation between independent variables whose value is more than 0.950. Then the results of the VIF calculation are also no more than a value of 10. So there is no multicollinearity.

Conclusion

The conclusion that the author can draw in chapter four, namely the results and discussion is that the research data has a normal distribution, there is no multicollinearity, there is no autocorrelation, and there is no heteroscedasticity. in addition, there are three hypotheses that pass (accept) from the seven hypotheses given. the following are the details of the seven hypotheses of this research:

The first hypothesis produces "roa variable has a significant and negative effect on the debt to equity ratio, then the first hypothesis is accepted".

The second hypothesis produces "the size variable does not have a significant and negative effect on the debt to equity ratio, so the second hypothesis is rejected".

The third hypothesis produces "the sagr variable does not have a significant and positive effect on the debt to equity ratio, so the third hypothesis is rejected".

The fourth hypothesis results "sa variable has a significant and negative effect on the debt to equity ratio, then the fourth hypothesis is accepted".

The fifth hypothesis produces "the wcta variable does not have a significant and positive effect on the debt to equity ratio, so the fifth hypothesis is accepted".

The sixth hypothesis produces "the etr variable does not have a significant and positive effect on the debt to equity ratio, then the sixth hypothesis is accepted".

The seventh hypothesis produces "risk variable has a significant and negative effect on the debt to equity ratio, so the seventh hypothesis is rejected".

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