THE CAPITAL STRUCTURE DETERMINATION OF MANUFACTURING COMPANY IN INDONESIA

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Abstrak. Penelitian ini menyajikan ukuran, pertumbuhan, liquiditas, dan profitabilitas perusahaan sebagai faktor-faktor yang menentukan struktur modal perusahaan. Penelitian ini menguji faktor-faktor yang menentukan struktur modal perusahaan pada perusahaan manufatur di Indonesia. Penelitian ini memiliki 189 perusahaan manufaktur sebagai sampel penelitian dengan menggunakan teknik *purposive sampling*. Karakteristik sampel dalam penelitian ini adalah perusahaan dengan laporan keuangan yang tersedia di *Database Osiris* dan tersedia pada periode tahun 2015-2019. Penelitian ini menyusun karakteristik *sample* tersebut untuk mendukung penelitian ini yang termasuk ke dalam penelitian kuantitatif. Penelitian ini mengkonfirmasi bahwa ukuran perusahaan mempunyai efek positif significant pada struktur modal perusahaan, sedangkan likuiditas dan profitabilitas perusahaan tidak.
Kata kunci: capital structure, size, growth, profitability, liquidity

Abstract. *This research represents size, growth, liquidity, and profitability as capital structure determinations. This research tests these capital structure determinations on manufacturing company in Indonesia. This research has 189 manufacturing companies as the sample that used purposive sampling technique. The predetermined characteristics of the sample are the financial reports of the company available in Osiris Database and available on the period of 2015-2019. This research arranges the predetermined characteristics of the sample in order to support this quantitative research. The research confirm that size has a positive significant effect on capital structure, while liquidity and profitability have negative effects.*
Keywords: *capital structure, size, growth, profitability, liquidity*

Introduction

In carrying out operational activities, it is important for the management to determine the capital structure decisions. Capital structure decision related to the composition of debt, preferred stock, and common stock. Management have to determine the source of funds efficiently. It can be the both form within company and outside the company in the sense that the funding decision is an optimal capital structure decision (Don, 2019).

The optimal capital structure is important because it has a direct effect on statement of financial position. The capital structure of any company describes the long-term capital which is expected crucial to help maximizing the company's stock price and firm value (Amjad et al., 2013). Mishkin (2000) stated company try to hold its capital because of the cost of capital. There are factors of the capital structure that have to be considered by company. These factors are internal factor, such us: size, growth, liquidity, and profitability (Yu, 2000; Amjad et al., 2013; Lisyawati et al., 2017; Efendi & Ngatno, 2018; Chowdhury & Zaman, 2018).

Size has direct effect on capital Structure (Gropp and Heider, 2010). Titman and Wessless (1998) stated that size makes possibility of fewer risks, such us in stability of cash and capital structure. Larger size can obtain more debt than the small one. While Cevheroglu-Acar (2018) stated negative relation between size and debt, larger company has the power in access capital structure because has economic of scale, less volatile.

Growth shows company's operational

activity. Company with higher of growth required to more funds than lower of growth company (Sokang & Ratanak, 2018). High growth company will continue to expand their business and the funds needed are certainly not small. Lisyawati, Oemar, & Supryanto (2017) stated that growth has a positive and significant effect on capital structure. Inversely, Yang et al., (2010) stated it has negative effect.

Chowdhury & Zaman (2018) stated that liquidity makes company has ability to cover the short-term obligations at the due date. Company has more power to pay its debt. Company makes capital structure decisions with more debt rather that issuing equity. While pecking order theory predicts liquidity has negative effect on leverage. Marozva (2015) stated that company with high level of liquidity have large internal funds so that company will use their internal fund first to finance their operational before using external financing through debt.

Profitability is the key factor that influence company's capital structure. It reflects the ability to generate profits from various activity (Petria, Capraru, &Ihnatic, 2015). Different theory suggests the different predictions. Based on trade-off theory, profitability has positive effect on capital structure (Um, 2001). It makes tax-benefit for the profit company. Inversely, Fengju et al. (2013) showed that profitability has negative effect on capital structure. Pecking Order Theory suggest manager to prefer uses financing first namely retained earnings then debt. Company with more profit tends to use retained earnings rather than financing with debt, while the less company uses debt financing because the internal fund is limited.

Based on this explanation, it shows that the capital structure decision is very important for the survival of the company. Many factors influence in determining company's capital structure, such us: size, growth, profitability, and liquidity. And from the empirical study, there are the variety results of testing the capital structure determinations. The objective of this research is to examine and fill the gap of the results of capital structure determinations, such us size, growth, profitability, and liquidity. This research also adds the empirical study especially on manufacturing company in Indonesia.

The capital structure is the company's long-term permanent funding mix (proportion), consisting of debt, preferred stock, and common stock (Horne & Wachonic, 2012). The source of capital structure comes from internal and external company. Internal fund can be in the form of own capital and retained earnings, while external funds can be in form of debts and shares (Strýčková, 2015). In relation to the problem of determining the sources of funds to be used, as well as the proportions each sources of funds, the company will analyze a number of factors then the targeted capital structure (Brigham &Houston, 2010). Leverage ratio such as equity to debt ratio can be used as capital structuremeasurement (Horne & Wachonicz, 2012). So, this study use debt to equity ratio for capital structure proxy.

Size can be expressed in terms of total assets. The greater assets, the greater size of the company. The amount of assets in a balance sheet position reflects the wealth. Assets owned by company consist of cash, current account with others, securities, loans, investments, prepaid expenses, fixed assets, leased assets, and other assets (Roman & Sargu, 2015). Size has direct effect on capital Structure (Gropp and Heider, 2010).Trade-off theory stated thatbig company tends to make more debt in order to make benefit of taxation. Titman and Wessless (1998) stated that size makes company more stable in cash flow and can generate more debt. Schildbach (2017) stated that size has positive effect on debt. It indicates company with larger size can obtain more debt than the small one. The larger company indicates the ability to pay debts. Based on theoretical explanation and empirical evidence, this research concludes the first hypothesis:

H1: Size has positive significant effect on company's capital structure

Growth shows company's operational activity. It can be express in term of asset's growth. Growth shows company's operational activity. Company with higher of growth required to more funds than lower of growth company (Sokang &

Ratanak, 2018). This goes along with expansion of business activity, so the company need more fund and it is not small amount. Lisyawati, Oemar, & Supryanto (2017) stated that growth has a positive and significant effect on capital structure. Based on theoretical explanation and empirical evidence, this research concludes the first hypothesis:

H2: Growth has positive effect on company's capital structure

Liquidity is the company ability to pay off its short term debt and obligations. So, the company has to maintain the current asset position in order to fund operating and investment activity from cash flow. Chowdhury & Zaman (2018) stated that liquidity makes company has ability to cover the short-term obligations at the due date. Company has more power to pay its debt. Company makes capital structure decisions with more debt rather that issuing equity. Cevheroglu-Acar (2018) stated that leverage company can prevent agency problems with higher liquidity. Based on theoretical explanation and empirical evidence, this research concludes the first hypothesis:

H3: Liquidity has positive effect on company's capital structure

Profitability is the company ability to generate its profit from operational activity by using capital (Fauzi & Nurmatias, 2019). Another definitions states that profitability is company's ability to generate profit in relations to sales, total assets, and own capital as the measure of operational efficient using its asset (Efendi & Ngatno, 2018). Profit is measure of company's performance. In accessing profitability, it can be seen from Return on Asset Ratio (ROA). Trade-off theory explain the benefit of profitability. Company with higher profitability will make more debt to shelter their income (Cevheroglu-Acar, 2018). It also makes tax-benefit for the profit company by increasing debt financing (Um, 2001). Based on theoretical explanation and empirical evidence, this research concludes the first hypothesis:

H4: Profitability has positive effect on company's capital structure.

Method

This is quantitative research. This research obtains data in form of numbers and uses statistical analysis. It is able to meet scientific principle, namely concentrate/empirical objectives, measurable, rational, and systematic (Sugiono, 2010). This study examines the factors of company's capital structure, such us: size, growth, profitability, and liquidity.

This research has 189 manufacturing companies as the sample that used purposive sampling technique. The predetermined characteristics of the sample are the financial reports of the company available in Osiris Database and available on the period of 2015-2019. This research arranges the predetermined characteristics of the sample in order to support this quantitative research.

Data is needed in this research is total assets, growth of tangible asset, Return on Asset Ratio (ROA), Loan to Deposit Ratio (LDR), and Debt to Equity Ratio (DER). This research uses secondary data which is obtained from Osiris Database.

The research uses unbalance panel estimated by fixed effect model. This research tests the hypotheses using Stata Software. The research model is testing the determination of capital structure such us size, growth, liquidity, and profitability. The model of this research is:

$$Capital\ Structure_{i,t} = a + \beta_1 size_{i,t} + \beta_2 growth_{i,t} + \beta_1 liquidity_{i,t} + \beta_1 profitability_{i,t} + e$$

Result and Discussion

The number of samples are 189 manufacturing companies in Indonesia. The data in this research is unbalance panel data, that means entirely information data are not available. This makes the number of observations is not the same. Table 4.1.1 shows the descriptive analysis for each measurement.

From Table 4.1.1, it can be seen the descriptive statistics of the sample study. The dependent variable is capital structure and the independent variables are size, growth, liquidity, and profitability. The mean of capital structure is 7.869 with 910 observations. The means of size, growth, the profitability for the sample are 12,441; 1,294; 1,434; and 4,280; 0,4; and -13,35 with 921,895,897, and 917 observations.

Table 4.1.1. Descriptive Statistics Sample Study

Variables	Obs.	Means (%)	Std. Dev.	Min	Max
Capital Structure	910	7,869	17,050	0,008	201,409
Size	921	12,441	3,844	1,361	19,679
Growth	895	1,294	1,948	0,009	42,464
Liquidity	897	1,434	2,665	0,010	61,230
Profitability	917	4,280	12,122	-60,570	73,010

This table presents the descriptive statistics for each indicator of this research variables.
Source: Processed data (2020)

Beside presents the descriptive statistics for each measurement in Table 4.1.1, this research presents the correlation value between variable in this study in Table 4.1.2. Table 4.1.2 presents correlation value between variables. From the Table 4.1.2 can be seen that size has a significant positive correlation to capital structure (r=0,0000; p<0,05). Growth has no significant negative correlation to capital structure (r=0,5910; p>0,10). Liquidity has negative significant correlation to capital structure (r=-0,0709; p<0,10). And profitability has negative significant correlation to capital structure (r=0,0000; p<0,05).

Table 4.1.2. Correlation test results between variables

	Capital Structure	Size	Growth	Profitability	Liquidity
Capital	1.000				
Structure	-				
Size	0,2792***	1.000			
	0,000	-			
Growth	-0,0181	0,0090	1.000		
	0,5910	0,7871	-		
Liquidity	--0,0709*	0,0303	0,5333***	1.000	
	0,0347	0,3650	0,0000	-	
Profitability	0,3895***	0,1789***	-0,0300	0,1325***	1.000
	0,0000	0,0000	0,3715	0,001	-

This table presents the results of the correlation test between variables used of this research.
****, **, and * are the significance level of 1%, 5%, and 10%.*
Source: Processed data (2020)

This research has four hypotheses. The first hypothesis is the effect of size on capital structure. The second hypothesis is the effect of growth on capital structure. The third hypothesis is the effect of liquidity on structure capital. And the fourth hypothesis is the effect of profitability in capital structure. Table 4.2.1 presents hypotheses testing results. These results have been considered the problem of autocorrelation, heteroscedasticity, linearity, and multicollinearity.

Table 4.2.1 shows the testing hypotheses results for the sample study. For the results, size has positive significant effect on capital structure with t-statistics 4,44. Growth also has no positive effect on capital structure. While profitability and liquidity have negative significant effect on capital structure with t-statistics -9,54 and -1,09.

The positive significant effect between size and capital structure can be explain with trade-off theory. Trade-off theory stated thatbig company tends to make more debt in order to make benefit of taxation. Titman and Wessless (1998) stated that size makes company more stable in cash flow and can generate more debt. Schildbach (2017) stated

that size has positive effect on debt. It indicates company with larger size can obtain more debt than the small one. The larger company indicates the ability to pay debts.

The negative significant effect between liquidity and leverage can be explain with pecking order theory. Pecking order theory predicts a negative relation between, liquidity and leverage. Marozva (2015) stated that company with high level of liquidity have large internal funds so that company will use their internal fund first to finance their operational before using external financing through debt.

The negative significant effect between profitability and leverage can be explain with pecking order theory. Pecking order theory suggest manager to prefer uses financing first namely retained earnings then debt. The more profitable the company, the more ability to generate earning. The earning can be used as additional capital in the form of retained earnings. Company with more profit tends to finance their investments with retained earnings rather than financing with debt while the less company uses debt financing because the internal fund is limited.

Table 4.2.1. Hypotheses Testing Results
The Effect of Size, Growth, Liquidity, and Profitability on Capital Structure

	β	t-statistics	p-value
Constant	-0,412	-1.09	0,276
Size	0.134***	4,44	0,000
Growth	0,148	0,90	0,368
Liquidity	-0,005***	-9,54	0,000
Profitability	-0,412**	-1,09	0,028

This table presents the results of the hypotheses of this research.
****, **, and * are the significance level of 1%, 5%, and 10%.*
Source: Processed data (2020)

Conclusion and Recommendation

This research examines the effect the factors that determine company's capital structure in Indonesia, especially in manufacturing company, such us: size, growth, liquidity, and, profitability. This research tests four hypotheses. The first hypothesis is size has positive significant effect on capital structure. The second hypothesis is growth has positive significant effect on capital structure. The third hypothesis is liquidity has positive significant effect on capital structure. The fourth hypothesis is profitability has positive significant effect on capital structure.

The results of this research are size has positive significant effect in capital structure. Growth has no significant effect in bank's capital structure. While liquidity and profitability has negative significant effect on capital structure. It indicates that first, third, and fourth hypotheses of this research are accepted.

The result of testing first hypothesis confirmstrade-off theory. It indicates that big company tends to make more debt in order to make tax-benefit. It also makes company trustworthy. Company with larger size can obtain more debt than the small one. Company can generate more debt because of its stability. The larger company indicates the ability to pay debts.

The result of testing third hypothesis confirms pecking order theory. It indicates that company with high level of liquidity have large internal funds so that company will use their internal fund first to finance their operational before using external financing through debt.

The result of testing fourth hypothesis confirms pecking order theory. Pecking order theory suggest manager to prefer uses financing first namely retained earnings then debt. The more profitable the company, the more ability to generate earning. The earning can be used as additional capital in the form of retained earnings. Company with more profit tends to finance their investments

with retained earnings rather than financing with debt while the less company uses debt financing because the internal fund is limited.

The limitations of this research is variable is limited. It makes the research has a quite small R-square. The future research can add more variable that related. This research also can be expanded by adding the effect capital structure in firm value and adding the comparative analysis in different type of company.

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