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THE DETERMINANTS OF LEVERAGE ON CONSTRUCTION COMPANY LISTED IN BURSA MALAYSIA

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Abstract

This research is conducted to evaluate the determinants of leverage on 29 construction companies listed in Bursa Malaysia over ten years (2008-2017). The purpose of this research is to observe whether the independent variables which are growth profitability, liquidity and tangibility gives any influence towards dependent variable which is leverage. Methods used in this study include Pooled Ordinary Least Square (POLS) Regression analysis, Random Effect analysis and Fixed Effect analysis. Random effect model was employed through a few tests and the result discovered that profitability (return on asset and return on equity) and liquidity have significant impact towards leverage. For recommendation, future research is urged to diversify the scope of sector such as industrial or services sector as it also gives huge contribution to the country. On top of that, future research can use other alternative or tools in gathering the data besides Thompson Reuters and annual financial reports while expanding the sample of study.

Keywords: Fixed effect, leverage, profitability, liquidity, tangibility random effect.

1. Introduction

Leverage is a result on how the company uses the financing from the borrowing and generates income to increase company's profitability in Alkhatib (2012). Every firm has kind of different level of leverage where each manager will try to achieve their company goals to attain an optimal on capital structure. However, the large amount of company borrowed, company tend to be exposed to the risk of default in pay back their debt. Once they are matured, the firms will more likely having high leverage and potential of bankruptcy. However, it does not mean that financial leverage is not a good thing. By having financial leverage, the firm can increase the return on investment for their shareholders as according to Mathur (2011). Other than that, every company must know the suitable time to use debt capital and from which sources they should distribute their debt funds.

To determine the leverage of the company, the most important financial indicator in corporate finance is capital structure where it is to highlight the significant of debt financing. Capital structure can be defined through its leverage where the mixture of a firm's debt and its equity by Alkhatib (2012). According to Hamid et al. (2015), this indicator is important when the firm provide information to the external users for decision making such as shareholders, creditors, investors, regulators, analysts and other stakeholders, however, the decision is difficult to be finalized because it could affect the performance of the firm. According to Jensen (1986), the good in leverage is including the tax deductibility of interest and enhanced the cash flow. In addition, by trade-off theory most of the companies recognize their ideal financial structure by correspond between the benefits and cost of taking on additional debt. However, Modigliani and Miller (1963) have contrast result where high financial leverage gives no impact to the high growth firms and low growth firm on the performance.

Growth is defined by the proxy by the different in total asset between two following year divided by previous year of total asset stated by Alkhatib (2012) and Ali (2011). Growth is an intangible asset, it will give problem to the company if there is high finance from the debt market. Firm with high opportunities of growth have a lower leverage ratio compared to those with lower growth opportunities Padron et al., (2016). While according to Tariq (2015), there are two results from two method that has been implement that is regression method. For the first result has shown that growth and leverage give negative impact towards leverage. However, from the second regression method that has been used, the result gives positive impact between growth and dividend policy. For further explanation, dividend policy of a firm is how well the company managers make decision related to the payment of dividends to their shareholders out of cash surplus.

A study done by Tariq (2015), profitability can be measure by the ability of a firm to pay dividend. The more profit a company makes, the higher the ability to pay dividend while on the contrary if the firm make less profit, the more struggle a company ability to pay dividend. Research based on Alkhatib (2012) and Gweyi et al. (2013) did an investigation on two sector which were industrial and service sector, when both sectors was combined, it showed no statistical relationship between profitability and leverage. In the meantime, when the two industrials were separated, is also showed no statistical relationship. In other research on Bhatti (2011), Ali (2011), Onofrei et al. (2015), Mittal and Kumari (2015) found that profitability reduces the leverage and shown significant negative impact on leverage. Tariq (2015) did two regression analysis and discovered for the first regression shown all the variables were negative impact

towards debt policy except for firm size. For the second regression, the result showed that profitability and liquidity have negative impact towards dividend while other variables gave positive impact. However, by Rehman (2013) did research on effect of financial leverage on financial performance, he found that there is positive relationship between leverage with return on asset.

Liquidity is computed by current ratio which is current assets divide with current liability. Other than that, liquidity is the amount that is available for use as expenditure or in investment. At the same time, it also shows the capability of a firm to pay back their current liabilities as when they are matured by Ross (1977). According to Mittal and Kumari (2015) and Onofrei et al. (2015) liquidity shown negative relation with leverage. While Alkhatib (2012) and Gweyi et al. (2013) found that both industrial and service sector exposed that liquidity have significant relationship with leverage. They studied 40 Sacco registered by Sacco Society Regulatory Authority (SASRA) extended from the period 2010 to 2012. Tariq (2015) which used regression analysis, the data gathered from the annual reports of companies from India and Pakistan during the years 2010-2014, he indicated that both equations indicate that liquidity is negatively related to leverage.

Tangibility is calculated by dividing total fixed asset with total asset according to Mittal and Kumari (2015). When a firm have huge amount of fixed asset, the firm can borrow on favourable terms by offering the security of their assets to the lenders. The higher the ratio of fixed assets-to-total assets should have a positive impact on firm leverage (Ali, 2011). In addition, Gomez et al. (2016) have showed tangibility is highly significant positive and increase the relationship with leverage and this result are a line with previous researcher. While based on Onofrei et al. (2015) discovered that leverage is negatively related to tangibility. As indicated by Alkhatib (2012) and Gweyi et al. (2013) both studies showed that for industrial and service sectors, there were insignificant relationship. However, when the studies separate the sectors into two, the results for the industrial sector discovered that variables for liquidity and tangibly have significant relationship with debt to equity, meanwhile the results for the service sector showed that growth rate, liquidity and tangibility have significant relationship with leverage.

2. Problem Statement

In order to sustain the positive growth in the market, the construction company must know how to manage their leverage as the companies deal with huge leverage depending on the project they have taken. Based on Department of Statistics Malaysia (Department of Statistics Malaysia, 2016), the performance of the construction had recorded a positive growth. In 2015, the gross output was increase at RM177.9 billion, with growth rate of 14.3% from 2010. By this means that well managed leverage is important as it will affect the performance of the construction companies. Also, the construction industry is the biggest contribution for the revenue in Malaysia which is 79%. In addition, Malaysia's construction industry is expected to be the fastest in the world from year 2016 to 2020 among other countries and also get the support from the government in order to improve Malaysia transportation network and tourism infrastructure (Zakariah, 2017).

As the conclusion, what are the factors will influence leverage on Construction Company in Malaysia? Therefore, that is the reason this study is being conducted.

3. Research Questions

For continuing this research, the research questions that will be conduct in order to get the result are as follow:

3.1. How these growths, profitability, liquidity, tangibility gives significant impact towards leverage of the company?

3.2. What is the most significant factor which affect leverage?

4. Purpose of the Study

This study aims to achieve the following objectives:

4.1. To determine the significant impact between growth, profitability, liquidity, tangibility towards leverage.

4.2. To identify the most significant factor which affect leverage.

5. Research Methods

This research is being conducted from the year 2008 until 2017 annual financial reporting for 29 companies in Malaysia under the construction sector which been listed in Bursa Malaysia. In order to get the right analysis, this research will be conducted by finding the determinants such as growth, profitability, liquidity and tangibility from the information in the annual financial report of each company. The source of the data is from the secondary data and it will be collected from Bursa Malaysia since the company that had been chosen is the company that only listed in Bursa Malaysia. Thus, it will be easier to collect data from the company annual report itself. Besides that, the data will also be collected from the Thompson Reuters in order to support the existing data if there is any missing data in the annual financial report.

5.1. Dependent Variable

Based on Alkhatib (2012), leverage is conducted by using debt to equity ratio where the portion of debt is being used to sustain the company's operation relative to equity. The lower the ratio the better

5.2. Independent variables

Growth can be calculated on how many percent increase in profit or income in year to year of the company's production by Mittal and Kumari (2015) and Alkhatib (2012). While profitability, ROA indicate on how companies earn their profit from the resources that they have Alkhatib (2012) and ROE revealed on how companies gain their income from the shareholder's money that had invested (Bhatti, 2011). Current ratio is used to measure the ability of the company to meet their obligation in long-term and short-term period Alkhatib (2012). Tangibility indicates if the company have high tangible asset, thus the company tend to have low in current asset. Therefore, the chances to get loan from creditor will be difficult and low in return to shareholders (Tariq, 2015).

5.3. Quantitative data analysis

A few methods used to analyse the relationship and impact of leverage among construction companies in Malaysia. These methods include Descriptive Analysis, Pearson Correlation Coefficient Test, Ordinary Least Square regression test (OLS), Breusch-Pagan Multipler Test and Hausman Fixed Test.

5.4. Research hypothesis

$H0_1$: There is no impact of growth, liquidity, profitability and tangibility on leverage of construction companies.

$H1_1$: There is an impact of growth, liquidity, profitability and tangibility on leverage of construction companies.

5.5. Model Equation

Leverage = a + β1Growth + β2ROA + β3ROE + β4CR + β5Tang + ε

Where; a   = Constant variable
        β1…5   = Coefficient
        Growth = Growth
        ROA   = Return on asset
        ROE   = Return on equity
        CR   = Current ratio
        Tang   = Tangibility
        ε   = Error term

6. Findings

6.1. Regression Analysis

Table 01. Pooled Ordinary Least Square (POLS) test

Variables	Stock returns		
	Coefficient	Standard error	P>|Z|
Growth	-0.0208	0.0511	0.684
ROA	2.8109	0.7812	0.000
ROE	-3.3998	0.3682	0.000
CR	-0.1795	0.0323	0.000
Tang	-0.2647	0.2723	0.332
_cons	0.8993	0.0770	0.000
R^2	0.4187		
Adj R^2	0.4084		
F-statistic	40.90		
Prob (F-Statistic)	0.0000		

As shown in Table 01, that only 41.87% of the factors of growth, ROA, ROE, current ratio and tangibility can explain the leverage among construction companies in Malaysia. The rest about 58.13% are

explained by other determinants that are not included in the study. However, this model is strong and fit since it is significant.

6.2. Random Effect Analysis

Table 02. Breusch-Pagan Lagrangian Multiplier test

	Var	sd = sqrt (Var)
Leverage	0.5391	0.7342
e	0.3063	0.5534
u	0.0204	0.1427
Prob>chi2	0.0214	

Null hypothesis is rejected as the table 02 above shows significant value of prob>chi2 is less than 0.05. Hence, panel data is the most suitable model for this study.

6.3. Regression Analysis

Table 03. Random Effect Generalized Least Square test

Variables	Stock returns		
	Coefficient	Standard error	P>|Z|
Growth	-0.0297	0.0512	0.562
ROA	2.9096	0.7652	0.000
ROE	-3.4709	0.3620	0.000
CR	-0.1818	0.0318	0.000
Tang	-0.2898	0.2666	0.277
_cons	0.9051	0.0880	0.000
R^2	0.4421		
Prob (F-Statistic)	0.0000		

Panel data estimation of random effect shown in the table 03. R^2 value of 44.21% means leverage in this study can be explained by the said variables at 44.21%.

6.4. Fixed Effect Analysis

Table 04. Hausman Fixed test

Variables	Coefficient		(b-B) Difference	sqrt (diag (V_b-V_B)) SE
	(b) fixed	(B)		
Growth	-0.0346	-0.0297	-0.0049	0.0093
ROA	2.9617	2.9096	0.0521	0.0751
ROE	-3.5084	-3.4709	-0.0375	0.0421
CR	-0.1830	-0.1818	-0.0012	0.0036
Tang	-0.3031	-0.2898	-0.0134	0.0259
Prob>chi2	0.9108			

The above test is to decide either to employ random effect model or fixed model (see Table 04). Since the result is insignificant, then researcher fails to reject null hypothesis and random effect model is the bets model suit this study.

6.5. Discussion

Table 05. Discussion

Variables	Coefficient	Results	Authors
Growth	-0.0297	Insignificant	Tariq (2015)
ROA	2.9096	Significant Positive	Rehman (2013)
ROE	-3.4709	Significant Negative	Onofrei et al. (2015)
CR	-0.1818	Significant Negative	Alkhatib (2012)
Tang	-0.2898	Insignificant	Mittal and Kumari (2015)
c	0.9051		

Leverage = *0.9051* – 0.0297Growth + 2.9096ROA – 3.4709ROE – 0.1818CR – 0.2898Tang + ε

Table 05 indicates that three independent variables of ROA, ROE and current ration are significantly affect leverage. 1% increase in ROA will increase the leverage by 2.91% as supported by Rehman (2013). Construction companies usually involves in mega and huge project so that is why when return on asset increase the level of leverage also increasing. This indicates that the company is investing on their asset to generate their income. In order to invest on their asset, the companies must have so many payments and debts along the way so that the project will start and return back in huge profit. Meanwhile, when ROE increase by 1%, leverage will reduce by 3.47%. The results indicate that most of the companies are investing their shareholder's equity efficiently to generate their income as according to Onofrei et al. (2015). On the other hand, when liquidity increase by 1%, leverage will decrease by 0.18%. Thus, it indicates that the companies are able to pay their short-term obligation and using their assets efficiently that is why the level of leverage is decreasing. However, for growth and tangibility, by any changes in both growth or tangibility will not give any impact towards leverage. This result is aligning with previous author, Tariq (2015) and Mittal and Kumari (2015) respectively.

7. Conclusion

This paper highlights the determinants of leverage for the construction companies in Malaysia and researcher has achieved both research objectives as this study found that only ROA, ROE and current ratio has significant impact on leverage and ROE is found to be the most significant factor which affect leverage of construction companies in Malaysia. After went through a few tests, random effect model, researcher employed random effect model is it is found to be the most appropriate model for this study. For recommendation, researcher is urged to diversify the scope of sector such as industrial or services sector as it also gives huge contribution to the country. On top of that, researcher can use other alternative or tools in gathering the data besides Thompson Reuters and annual financial reports while expanding the sample of study. Furthermore, researcher can try to use other variable either independent or dependent variable as both will give different result and finding such as use size of firm for independent variables, use interest bearing ratio, use debt ratio for dependent variable and so much more.

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