

# Internationalization, firm Performance, and capital structure: an empirical study in Indonesia

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**ABSTRACT:** The objective of this study is to examine the impact of internationalization, firm performance, and capital structure: an empirical study in Indonesia. This research used industrial manufacturing companies listed on the Indonesian Stock Exchange over the 2012-2016 period. The dependent variable in this study is the capital structure. Independent variables used are internationalization and firm performance. Control variables used are size, age current ratio, tangibility, and total asset turnover. This study used multiple linear regression analysis models (two-stage least square) to test the hypothesis with a sample of 57 manufacturing companies listed on the Indonesian Stock Exchange over the 2012-2016 period. The number of observations used in this study was 285 observations at first by using classical. The study findings suggest that internationalization has a significant positive effect on relative performance based on historical target, and a significant negative effect on relative performance based on the industrial target. While relative performance based on historical target and relative performance based on industrial target has a significant positive effect on short term debt and private debt and also has a significant negative effect on long term debt, total debt, and public debt.

**Keywords:** internationalization, firm performance, capital structure.

## 1 INTRODUCTION

The In a more globalized world, especially because of liberalization of trade, business practices are experiencing international market expansion and diversification. According to the Dictionary of Economics, globalization helps to unite the world financial markets into one that cannot be separated from the meaning of “global” which means “worldwide” in the economic field. Globalization causes interdependence between buyers and sellers in the financial centers in the entire world.

According to Indonesia’s export data in 2017, there was an increase in exports to the US reaching \$1.72 billion. The increase in exports affects Indonesia’s Gross Domestic Product (GDP). This condition is able to help to increase Foreign Direct Investment (FDI) in terms of investment, encouraging economic growth through technology transfer, development of human resources, jobs employment and easier access to global markets, and estimating the increase of the internationalization process in Indonesia.

Based on company perspective, internationalization has several advantages. Accord-

ing to Markowitz (1952), the main benefit of internationalization is to reduce the systematic risk of the company’s domestic market caused by the correlation between markets that tends to be imperfect, thereby reducing the risk of the domestic market (Lessard 1983 instead of Olibe et al. 2008).

In addition, improvement of the company performance can be improved by internationalization namely: (1) the emergence of economies of scale, (2) the emergence of economies of scope, (3) information and innovation, (4) easier access to resources, and (5) bargaining power.

On the contrary, the internationalization process also gave negative impact to the company, facing the increasing cost of uncertainty. As the company enters a foreign market, it faces not only the risk from its own country, but also from the investment destination country, such as cultural, economic, and political risks (Goerzen et al. 2010 instead of Thomsen 2012). In addition, there are also other costs such as transaction costs (Williamson 1975 instead of Thomsen 2012), agency/monitoring problems (Grant et al. 1988), and information asymmetry (Jin & Myers 2006).

Internationalization based on previous research has benefits and costs. If the cost is greater than the benefits provided, then internationalization will have a negative impact on company performance. Conversely, if the benefits outweigh the costs incurred then internationalization will have a positive impact on the company's performance.

In a previous study, Osorio et al. (2016), and Contractor et al. (2007) conclude a negative effect on the performance of the company internationalization. This happened because the costs incurred by the company to carry out the internationalization process are greater than the benefits received by the company and the condition of the company at the beginning of its operations in areas that are less familiar so it can reduce company performance. Likewise, Rugman & Oh (2010) state a positive influence of internationalization on company performance. By conducting an internationalization process, the company will expand its market share and is expected to increase sales and improve company performance.

Based on previous studies, it can be concluded if the internationalization increases, the company performances will also increase, due to the benefits gained as a result of internationalization is greater than the costs incurred so that internationalization has a positive impact on firm performance.

**H1:** Internationalization in a linear manner has a positive influence on firm performance.

Leverage can be calculated using total debt divided by total assets, long term debt divided by total debt, short term debt divided by total assets, public debt divided by total assets, and private debt divided by total assets. By using total assets divided by long term debt, it relates to long-term operations that will affect capital structure while short term debt only relates to bank debt that has a short-term maturity. Long term debt will cause a cost of debt that affects the company's capital structure ( $WACC = we*ke + wd*kd$ ).

**H2:** Company performance has a negative influence on the capital structure.

## 2 RESEARCH METHODS

This study used two-stage least square (2SLS) processing method to determine the effect of independent variables on the dependent variable. The dependent variables used were LTD, STD, TD, PVD and PBD and the independent variables used in this study were internationalization (IS), RPH, RPI, while the control variables were SIZE, TANG, RE, CR, and TATO.

The models are:

$$RPH_t = \beta_1 + \beta_2 INT_{i,t} + \beta_3 INT_{i,t(-1)} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (1)$$

$$RPI_t = \beta_1 + \beta_2 INT_{i,t} + \beta_3 INT_{i,t(-1)} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (2)$$

$$STD_t = \beta_1 + \beta_2 RPI_f + \beta_3 TATO_{i,t} + \beta_4 CR_{i,t} + \beta_5 TANG_{i,t} + \varepsilon \quad (3)$$

$$STD_t = \beta_1 + \beta_2 RPH_{i,t} + \beta_3 TATO_{i,t} + \beta_4 CR_{i,t} + \beta_5 TANG_{i,t} + \varepsilon \quad (4)$$

$$LTD_t = \beta_1 + \beta_2 RPI_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (5)$$

$$LTD_t = \beta_1 + \beta_2 RPH_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (6)$$

$$TD_t = \beta_1 + \beta_2 RPI_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (7)$$

$$TD_t = \beta_1 + \beta_2 RPH_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (8)$$

$$PVD_t = \beta_1 + \beta_2 RPI_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (9)$$

$$PVD_t = \beta_1 + \beta_2 RPH_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (10)$$

$$PBD_t = \beta_1 + \beta_2 RPI_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (11)$$

$$PBD_t = \beta_1 + \beta_2 RPH_f + \beta_3 TATO_{i,t} + \beta_4 Age_{i,t} + \beta_5 Size_{i,t} + \varepsilon \quad (12)$$

where STD = Short term debt; LTD = Long term debt; TD = Total debt; PVD = Private debt; PBD = Public debt; RPI = Relative performance based on industrial target; RPH = Relative performance based on historical target; RPIf = Relative performance based on industrial target forecast; RPHf = Relative performance based on historical target; INT = Internationalization; Age = Company age; Size = Company size; TATO = Total asset turnover; CR = Current ratio; TANG = Tangibility;  $\varepsilon$  = Standard deviation.

## 3 RESULTS AND DISCUSSIONS

Regression in this study used the two stage least square (2SLS) regression method, so that the pro-

cessing of this model went through two stages of regression. For the RPH and RPI models, in the first stage, the relationship between the INT, RPH, and RPI variables was first sought as the dependent variables, with the respective control variables as independent variables, so that  $RPH_f$  and  $RPI_f$  variables were found. In the second stage, the relationship between the STD, LTD, TD, PVD and PBD variables was sought as the dependent variables, with the control variable as an independent variable, followed by the RPHF and RPIF variables which are also independent variables.

Table 1. First Stage Regression

Var	RPI		RPH	
	Coef	t-stat	Coef	t-stat
AGE	0,0073***	7,9059	0,0067***	5,9663
SIZE	0,0434***	9,1673	0,0405***	21,6861
INT	-0,0085***	-2,0421	0,0121*	1,8224
INT(-1)	0,0450**	2,0459	-0,0074	-0,3537
N	285		285	
Adj R <sup>2</sup>	0,9384		0,4790	

\*\*\*significant  $\alpha = 1\%$ , \*\*significant  $\alpha = 5\%$ , \*significant  $\alpha = 10\%$

In the first stage of this model, the relationship between the independent variable and the control variable was first sought from the variables that affect the RPI and RPH variables in the second stage, namely the  $RPH_f$  and  $RPI_f$  variables. Internationalization variables negatively and significantly affect RPI. This finding is consistent with findings from the study conducted by Jung & Bansal (2009) which found a negative and significant influence of internationalization on relative performance based on industrial targets. This means that whenever there is an increase in internationalization, it will have an impact on the RPI decline. This negative influence is caused by other companies within the industry which more focused on the domestic market, causing the performance to be higher than companies that focused more on internationalization.

In addition, company internationalization costs are higher than the benefits of internationalization received by the company, causing the company's performance to decline. Internationalization costs incurred by companies such as the cost of adapting to the cultural and institutional norms of different countries (Ghoshal & Bartlett 1990), the costs of coordination and corporate governance arise due to environmental differences and high transaction and transportation costs (Contractor et al. 2007). Furthermore, it is also caused by companies that are expanding or internationalizing processes that require no small amount of money to invest, such as the purchase of building operations, machinery for production, etc. as to increase the company's assets. The high

assets of the company will certainly have an impact on increasing the company's depreciation burden and certainly will reduce profits or company performance.

Table 2. Second Stage Regression

Var	STD	LTD	TD
RPIF	0,3943*** (3,7312)	-0,4697*** (-5,9214)	-0,6758*** (-2,7430)
CR	-0,0710*** (-17,7260)	0,0720*** (16,5273)	-0,0750*** (-17,8771)
TATO	-0,0016 (-0,1301)	0,0002 (0,0186)	-0,0393*** (-6,1894)
TANG	-0,4129*** (-10,2769)	0,4066*** (8,9177)	-0,2223*** (-7,9030)
N	285		285
Adj R <sup>2</sup>	0,9933		0,9833

\*\*\*significant  $\alpha = 1\%$ , \*\*significant  $\alpha = 5\%$ , \*significant  $\alpha = 10\%$

The positive influence of internationalization on company performance in this study also supports from the research conducted by Mauri & Figueiredo (2012) instead of Osorio et al. (2016) where it is revealed that internationalization carried out by companies are able to reduce performance instability through geographical dispersion and outsourcing. Both of these are alternatives for diversifying risk, where risk diversification is one of the goals of internationalization. Maximized risk diversification opportunities allow companies to minimize additional operational costs so it can help to improve work performance.

The results are consistent with the theory put forward by the trade-off Brealey et al. (2008) instead of Osorio et al. (2016) which states that high profits should have more debt service capacity and more taxable profits that are protected therefore must provide a higher debt ratio. This means that companies will use more debt to get higher profits. This study supports the research conducted by Bram (2008) instead of Osorio et al. (2016) which states that profitability has a positive effect on the company's capital structure.

TANG variable has a significant negative effect on STD caused by the company in the short term requires more working capital than investment capital. CR variable also has a negative and significant impact on the STD because the company has more receivables and inventories in the short term than cash and equivalents.

RPH and RPI variables negatively and significantly affect LTD. Long term debt is measured by long term debt divided by total debt. In the event of a rise in the company's performance (RPH and RPI), the company will also reduce long-term debt used by the company for expansion, purchase of machinery, and so on because companies prefer to use internal rather than external funding.

Table 3. Second Stage Regression

Var	PBD	PBV
RPIF	-0,0521*** (-5,4575)	-0,4697*** (5,4695)
CR	0,0003*** (2,6717)	-0,0190*** (-5,6879)
TATO	0,0002*** (3,5168)	0,0269** (2,0482)
TANG	0,0011 (1,5999)	0,1636*** (3,8492)
N	285	285
Adj R <sup>2</sup>	0,9936	0,9756

\*\*\*significant  $\alpha = 1\%$ , \*\*significant  $\alpha = 5\%$ , \*significant  $\alpha = 10\%$ .

This is in line with the studies by Serghiescu et al. (2014), Onofrei et al. (2015), and Kim et al. (1993) who also found a significant negative result. The results of this study are also supported by the pecking order theory, namely, when the profitability of the company increases, it will be easier for the company to generate internal funds for its activities so that less debt is used by the company. The TANG variable has a negative and significant effect on STD because the company uses fixed assets for the long term as collateral to increase its debt.

RPH and RPI variables negatively and significantly affect TD. Total debt is measured by total debt divided by total assets. In the event of an increase in the company's performance (RPH and RPI), the company will also reduce the total debt that companies use for expansion, purchase of machinery and so on because companies prefer to use internal rather than external funding. This is in line with the findings of Serghiescu et al. (2014), Onofrei et al. (2015), and Kim et al. (1993) who also found a significant negative result. The results of this study are also supported by the pecking order theory, namely when the profitability of the company rises, it will be easier for the company to generate internal funds for its activities so that less debt is used by the company.

RPH and RPI variables positively and significantly affect PVD. Private debt is measured by private debt divided by total debt. When there is an increase in company performance (RPH and RPI), the company will also increase the private debt that can be obtained from banks and other financial institutions. This is because companies engage in internationalization tend to use letters of credit which can also be used as collateral for short-term loans.

Table 4. Second Stage Regression

Var	STD	LTD	TD
RPHF	0,3426*** (2,8431)	-0,4050*** (-4,8503)	-0,7895*** (-2,6755)
CR	-0,0712*** (-17,7781)	0,0720*** (16,4969)	-0,0752*** (-17,1076)
TATO	-0,0008 (-0,0736)	-0,0006 (-0,0555)	-0,0385*** (-6,3247)
TANG	-0,4043*** (-10,2770)	0,3971*** (9,0180)	-0,2235*** (-7,2649)
N	285	285	285
Adj R <sup>2</sup>	0,9932	0,9913	0,9835

\*\*\*significant  $\alpha = 1\%$ , \*\*significant  $\alpha = 5\%$ , \*significant  $\alpha = 10\%$ .

Table 5. Second Stage Regression

Var	PBD	PBV
RPHF	-0,0237*** (-5,9640)	-0,4082*** (9,9112)
CR	0,0002*** (2,5297)	-0,0182*** (-5,2870)
TATO	0,0001*** (4,4848)	0,0259** (1,9604)
TANG	0,0004 (1,5537)	0,1637*** (3,7617)
N	285	285
Adj R <sup>2</sup>	0,9916	0,9745

\*\*\*significant  $\alpha = 1\%$ , \*\*significant  $\alpha = 5\%$ , \*significant  $\alpha = 10\%$ .

RPH and RPI variables negatively and significantly affect PBD. Public debt is measured by the public debt divided by total debt. When there is an increase in company performance (RPH and RPI), the company will also reduce the public debt that can be obtained from bond issuance and prefer to increase private debt.

## 4 CONCLUSION

In the RPI model, it was found that internationalization had a negative and significant influence on company performance while the RPH model had a positive and significant influence on company performance. In the STD and PVD models, it is found that company performance had a positive and significant influence on the company's capital structure. While for the LTD, TD and PBD models, it was found that the company's performance had a negative and significant influence on the capital structure.

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