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# THE MODERATING ROLE OF AGENCY COST ON THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND FIRM PERFORMANCE: EMPIRICAL EVIDENCE FROM INDONESIA STATE-OWNED ENTERPRISES

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**Abstract:** The Indonesian government's plan to focus more on infrastructure is an opportunity for State-Owned Enterprises (SOEs) in Indonesia specially in construction sector. Joko Widodo, as the President of the Republic of Indonesia stated, despite various inputs, the government decided to focus on infrastructure development in 2015. With the large-scale construction project, SOEs in construction sector will attempt to achieve an optimal capital structure in order to continue the company's operations. The purpose of this paper is to explore the moderating role of agency cost on the relationship between capital structure and firm performance. Using 63 data observations of 7 Indonesia SOEs in construction sector for the period from 2010 to 2019. Multiple Regression Analysis and Moderated Regression Analysis is used to investigates the moderating role of agency cost on the relationship between capital structure and firm performance.

The results indicate that the capital structure has positive effect on ROE. Furthermore, agency cost appears to moderate the relationship between capital structure and firm performance. The means of capital structure and performance before and during Joko Widodo era were analyzed using t-test. Significant difference was found between the groups before and during Joko Widodo era. This result shows that the capital structure and performance of SOEs changed following the infrastructure development policy.This research is to provide further enrichment related to the problem of inconsistency in the relationship between capital structure and firm performance in agency cost hypotheses. In addition, this study provides an overview of the optimal capital structure, especially for SOEs in the construction sector in Indonesia.

Despite the extensive research done on the area of capital structure since 1958, understanding in the area is still inconclusive specially in SOEs. The policy of infrastructure development in 2015 insist SOEs to achieve an optimal capital structure in order to continue the company's operations. Thus, how SOEs manage their capital structure?

**Keyword:** *Capital Structure, Agency Cost, Firm Performance, SOEs, Construction Sector*

## INTRODUCTION

Selection the optimal capital structure is an integral part in determining the combination of the financial resource, as it related to operational activities, and investment to increase firm value (Berger & Bonaccorsi di Patti, 2006; Kumar, Colombage, & Rao, 2017). Optimal capital structure can affect the company's competitive advantage and market share which leads to firm value (Gill, Biger, & Mathur., 2011; Kumar et al., 2017). While, a wrong decision or incorrect may lead to financial distress and eventually to bankruptcy (Eriotis, Vasiliou, & Ventoura-Neokosmidi, 2007; Rehman, 2016; Singh & Kumar, 2012; Tifow & Sayilir, 2015). Therefore, capital structure is one of the major areas of concern for a firm. These decisions are crucial as they significantly affect the financial performance of the firm.

Capital structure is define as the mix of debt and equty financing (Brealey, Stewart, & Marcus, 2017). Capital structure has been one of the popular and the argumentative topics among the scholars in finance (Tifow & Sayilir, 2015). Over just the past 60 years the number of studies has increased, each proposing its own set of core determinants (Hang, Geyer-Klingeberg, Rathgeber & Stöckl., 2018). Previous research has shown that some companies have certain debt ratios and issue debt or equity components at a certain level to maintain the health of the company (Graham & Harvey, 2001; Baker & Powell, 2012). However, until now, there has been no general agreement about the capital-structure debate and understanding in the area is still inconclusive (Al-Najjar & Hussainey, 2011; Haron, 2014). There are some well-known and useful theories, however there is no universal theory of the debt-equity choice and no reason to expect one (Myers, 2001).

The determinant factors of the financial mix of an organization aren dynamic in nature (Kumar et al., 2017). This is depending on firm-specific and industry to which the firms belongs and the micro-economic and macro-economic environment of the firm. Booth, Aivazian, Demirguc-Kunt, & Maksimovic (2001) explain that capital structure in developed countries is mainly affected by Gross Domestic Product (GDP), economy growth rate, inflation rate, etc. Consequently, financial mix is an important strategic decision that is becoming increasingly more crucial and challenging in organization.

Optimal combination of equity and debt is essential while formulating the capital structure of the firm as it is considered as a significant antecedent for enhancing the firm's performance (Ahmed & Afza, 2019). A company that plans to venture into new project or to upgrade their resource (technology, machine, material, etc.) must make arrangements to finance the project in such a way that it could be minimize its cost. With this, the firm aims to increase the shareholder's wealth which will affect the firm's value. Because financing decisions have an impact on the firm's value, capital structure decisions are very vital for a firm's progress (Kumar et al., 2017).

Research in the area of capital structure has revealed that financing decisions are inconclusive and still a puzzle for the researchers. Haron (2014) suggest that different definitions of capital structure produced different results. Dao & Ta (2020) conducted a meta-analysis of 50 articles with 540 studies related to capital structure and firm performance between 2004 – 2019 showing that there is a negative relationship between capital structure and firm's performance. Research Dao & Ta (2020) shows that 73.1% of studies use ROA and ROE, while 26.1% use Tobin's Q as a measure of firm's performance. This shows that accounting-based financial performance measure, are commonly used in previous studies. This is in line with previous literature that uses a number of firm performance measures to test the agency cost hypothesis using financial ratios from balance sheets and income

statements (eg. Ang et al., 2000; Demsetz & Lehn, 1985; Gorton & Rosen, 1995; Mehran, 1995).

Previous research has shown that agency costs have a significant role in organizational decisions, such as the choice of capital structure and dividend policy. According to Pandey & Sahu (2019), relationship between capital structure and firm's performance can be effected by agency costs. Agency costs are an important issue in corporate governance in the financial and non-financial industries. The existence of separation of ownership and control in the company can result in a conflict of interest between the principal and the agent (Berger & Bonaccorsi di Patti, 2006). This is because the principal's goal is to maximize shareholder value, while the agent as the manager aims to manage the company in such a way that the incentives obtained by the agent will increase. This relationship causes the emergence of agency costs (Jensen & Meckling, 1976). Agency costs can arise due to conflicts between shareholders and management as well as conflicts between shareholders and creditors (Myers, 1977).

The high of agency costs can affect the firm performance, this is because the high of agency costs will reduce the incentive for management. Agency costs can be measured by various proxies such as ratio of selling, general and administrative to sales, asset utilization ratios, sales to assets ratios, and free cash flow (Gul, Sajid, Razzaq & Afzal, 2012). Previous research has shown that agency costs are related to leverage and firm performance. Berger & Bonaccorsi di Patti (2006) stated that a small increase in leverage will reduce agency costs which have an impact on increasing company performance, but large increases in leverage increase agency costs which have an impact on decreasing firm performance.

The construction sector in Indonesia is one of the sectors that made a high contribution to Gross Domestic Product (GDP) in the first quarter of 2019 which was 10.76 percent (BPS, 2019). Structurally, the Indonesian economy during 2019 was supported by the industrial sector 19.62 percent, the agricultural sector 13.45 percent, the trade sector 13.09 percent, and the construction sector by 10 percent which contributed to GDP (CNBC, 2019). This indicates that the construction sector occupies the fourth place as the driver of economic growth in 2019. Although the 2019 economic growth only grew by 5.02 percent, lower than the 2018 achievement of 5.17 percent, this was also due to the slowing growth of the GDP supporting sector.

Slowing growth in the construction sector in 2019 is due to the construction company's cash flow more driven by the divestment of assets as well as the government's plan will focus more on the social fund in comparison with spending on infrastructure (Kontan, 2019). Asset divestment carried out by several construction companies in 2019 and resulted in a decrease in cash flow from the company's operational activities. The divestment of assets carried out by several construction companies was also due to the increasing debt of the SOEs in construction sector in order to boost infrastructure projects (CNBC, 2019). In addition, the government's shift in focus on human resource development led to a decrease in budget allocations for the construction industry.

In order to promote equitable development in Indonesia, the government has encouraged infrastructure development. The government believes that infrastructure is the most influential factor in economic growth. The government's efforts to encourage infrastructure development are supported by an abundant infrastructure budget. Therefore, to carry out its mission, the Government asks all parties to take part in the infrastructure development process. SOEs are one of the parties requested by the Indonesia Government to participate in infrastructure development projects. Because infrastructure projects are expensive and not

fully financed by the government, this forces SOEs to look for other funding sources, one of which is through debt.

Standard & Poor's Global Ratings pays attention to the balance sheets of SOEs involved in government infrastructure development assignments (Kontan, 2018). The debt ratio of 20 SOEs listed on the Indonesia Stock Exchange and involved in government infrastructure development projects showed a 5-fold increase in EBITDA. This is because SOEs have entered into bank loan contracts or carry over contracts and issued bonds to finance government infrastructure projects which resulted in the weakness of the SOE's balance sheet. The increase in loans made by SOEs was due to the need to fulfill working capital such as salaries, due to frequent delays in the revenue recognition process because the projects being carried out were still in the construction stage. The turnkey contract scheme or Contractors Pre-Financing (CPF) is also one of the causes of the weakening of the SOE's balance sheet. This is because in the turnkey scheme the company is forced to increase its debt when the project development capital is insufficient, while on the one hand the full payment has not been obtained. Even though SOE debt is getting higher, in general the government does not mind this because the weakening of the company's balance sheet reflects the productivity of SOEs in working on many projects (Kompas, 2018).

Presidential Regulation Number 56 of 2018 on the Second Amendment to Presidential Regulation Number 3 of 2016 on Acceleration of Implementation of National Strategic Projects explained that during the 2014-2019 period of government there were approximately 277 government strategic project plans such as roads and bridges, trains, urban transportation, water and sanitation, oil and gas, electricity, ports, and information technology (KPPIP, 2018). The involvement of SOEs in most national strategic projects is like a double-edged sword for SOEs. This is because SOEs that receive infrastructure assignments must carry out assignments from the government to carry out development. However, the cost of infrastructure projects is expensive and not fully financed by the Government, this forces SOEs to look for other funding sources, one of which is through debt. Whereas SOEs must always pay attention to good corporate governance practices and be able to maintain the health and long-term sustainability of the company.

The Indonesian government's plan to focus more on infrastructure is an opportunity for State-Owned Enterprises (SOEs) in Indonesia specially in construction sector. Joko Widodo, as the President of the Republic of Indonesia stated, despite various inputs, the government decided to focus on infrastructure development in 2015. With the large-scale construction project, SOEs in construction sector will attempt to achieve an optimal capital structure in order to continue the company's operations. The purpose of this paper is to explore the moderating role of agency cost on the relationship between capital structure and firm performance of SOEs from 2010 – 2019 before and during Joko Widodo era.

This research is to provide further enrichment related to the problem of inconsistency in the relationship between capital structure and firm performance in agency cost hypotheses. In addition, this study provides an overview of the optimal capital structure, especially for SOEs in the construction sector in Indonesia.

## Theoretical Background & Hypothesis Development

Capital structure is define as the mix of debt and equty financing (Brealey et al., 2017). The capital structure can provide benefits as well as costs for the company. Gitman & Zutter (2014) states that debt can cause (1) an increase in the risk of bankruptcy due to debt obligations, (2) agency costs arising from monitoring costs, and (3) information asymmetry

between managers and investors. However, debt can provide benefits for companies through tax shield from interest payments.

Capital structure has been one of the popular and the argumentative topics among the scholars in finance (Tifow & Sayilir, 2015). Optimal combination of equity and debt is essential while formulating the capital structure of the firm as it is considered as a significant antecedent for enhancing the firm's performance (Ahmed & Afza, 2019). Over just the past 60 years the number of studies has increased, each proposing its own set of core determinants (Hang et al., 2018). There are some well-known and useful theories, however there is no universal theory of the debt-equity choice and no reason to expect one (Myers, 2001).

Financing assets through debt is considered more profitable for the business than equity financing because the interest paid on debt is tax deductible. The agency theory explains that a high debt ratio can reduce agency costs. Furthermore, Ross (1977) explains that a high debt ratio gives a positive signal to the market that the company has sufficient cash flow in the future. Lubatkin & Chatterjee (1994) argues that debt can improve firm performance because part of the cost of debt (interest) can be deducted from taxes. Trade off theory states that companies will carry out funding from debt to a certain level, where tax savings (tax shield) are equal to the cost of financial distress Therefore, theoretically, the capital structure affects the firm performance.

Previous research has shown that capital structure has a positive effect on firm performance (Ahn et al., 2006; Bei & Wijewardana, 2012; Berger & Bonaccorsi di Patti, 2006; O'Brien et al., 2014; Whiting & Gilkison, 2000). Afza & Ahmed (2017) shows that capital structure has a positive effect on firm performance as measured using Tobin's Q. Vijayakumaran (2018) shows that capital structure has a positive effect on firm performance as measured using ROA and ROE. Meanwhile, Berger & Bonaccorsi di Patti (2006) shows that a high level of leverage or a low ratio of equity capital is associated with higher profit efficiency.

Furthermore, Opler & Titman (1994) explain that a higher debt ratio negatively affects sales growth, especially in industries that have intense competition. Majumdar & Chhibber (1999) show that the company's capital structure has a negative effect on the company's financial performance. Previous research has shown that capital structure has a negative effect on company performance (see Abata & Migiro, 2016; Cai & Zhang, 2011; Chen, Chen, Liao, & Chen, 2009; Coricelli, Driffield, Pal, & Roland, 2012; Gleason, Marthur, & Marthur, 2000; Hung, Chan, & Hui, 2002; Yazdanfar & Öhman, 2015). Based on previous research, the hypothesis proposed in this study is as follows:

**H1 : Capital structure has a positive effect on the firm performance of SOEs**

The use of debt in the capital structure can prevent non-essential company expenses and encourage managers to operate the company more efficiently. This causes agency costs to decrease and subsequently the company's performance is expected to increase (Berger & Bonaccorsi di Patti, 2006). Previous research has shown that agency costs are related to leverage and firm performance. Berger & Bonaccorsi di Patti (2006) stated that a small increase in leverage will reduce agency costs which have an impact on increasing company performance, but large increases in leverage increase agency costs which have an impact on decreasing firm performance.

Agency costs can be measured by various proxies such as ratio of selling, general and administrative to sales, asset utilization ratios, sales to assets ratios, and free cash flow (Gul et al, 2012). This study uses two alternatives in measuring agency costs i.e., expense ratio and asset utilization ratio. Previous research has suggested that these two measures are reliable proxies for agency costs (Ang et al., 2000; McKnight & Weir, 2009; Rashid, 2015; Singh & Davidson, 2003; Zhang et al., 2016). This study uses both proxies to measure the moderating effect of agency costs between capital structure and financial performance. Based on previous research, the hypothesis proposed in this study is as follows:

**H2 : Capital structure has a positive (negative) effect on firm performance if agency costs are low (high)**

The Indonesian government's plan to focus more on infrastructure is an opportunity for State-Owned Enterprises (SOEs) in Indonesia specially in construction sector. Joko Widodo, as the President of the Republic of Indonesia stated, despite various inputs, the government decided to focus on infrastructure development in 2015. With the large-scale construction project, SOEs in construction sector will attempt to achieve an optimal capital structure in order to continue the company's operations. Thus, to determine whether there are differences in capital structure and performance of the SOEs before and during the Joko Widodo era, the hypothesis proposed in this study is as follows:

**H3 : There is a difference in the means of capital structure of SOEs in the construction sector between before and during Joko Widodo era**

**H4 : There is a difference in the means of firm performance of SOEs in the construction sector between before and during Joko Widodo era**

## Research Methodology

The purpose of this paper is to explore the moderating role of agency cost on the relationship between capital structure and firm performance of SOEs in construction sector before and during Joko Widodo era. The years 2010 – 2014 were before President Joko Widodo, while the years 2015 – 2019 was during President Joko Widodo. The sampling technique used was purposive sampling with the criteria of companies that published complete. Based on these criteria, the number of samples obtained is 7 SOEs (63 observations).

## Variable Measurement & Statistical Model

In order to investigate moderating role of agency cost on the relationship between capital structure and firm performance, the dependent variable is firm performance (ROA and ROE). The independent variables in this study is capital structure (debt to assets ratio). Last, the moderating variabel is agency cost (AUR and ER). Table 3 shows the measurement of variables. According to previous research (eg. Dessí & Robertson, 2003; Margaritis & Psillaki, 2010; Vijayakumaran, 2018), this study uses several control variables. These variables include firm size (SIZE), and firm risk (RISK). The use of these variables allows assessing the effect of capital structure on firm performance from other observable characteristics of the company.

**Table 1. Measurement of Variables**

| Variables | Measurement |
|---|---|
| Firm Performance | Return of Assets (ROA) & Return on Equity (ROE) |
| Debt | Total Debt / Total Assets & Long-Term Debt / Total Assets |
| Asset Utilization Ratio | Revenue / Total Assets |
| Expense Ratio | SG&A Expense / Total Assets |
| Firm Size | Natural logarithm of total assets |
| Risk | σROA |

Using 63 data observations of 7 Indonesia SOEs in construction sector for the period from 2010 to 2019. Multiple Regression Analysis and Moderated Regression Analysis is used to investigates the moderating role of agency cost on the relationship between capital structure and firm performance. The following regression model is:

$$FP = \alpha + \beta_1 DEBT + \beta_2 SIZE + \beta_3 RISK + \varepsilon \quad (1)$$

$$FP = \alpha + \beta_1 DEBT + \beta_2 AUR + \beta_3 DEBT * AUR + \beta_4 SIZE + \beta_5 RISK + \varepsilon \quad (2)$$

$$FP = \alpha + \beta_1 DEBT + \beta_2 ER + \beta_3 DEBT * ER + \beta_4 SIZE + \beta_5 RISK + \varepsilon \quad (3)$$

Description:
FP = Firm Performance (ROA/ROE)
DEBT = Debt to Assets Ratio
AUR = Asset Utilization Ratio
ER = Expense Ratio
SIZE = Firm Size
RISK = Firm Risk

**RESULT**

**Table 2. Statistik Deskriptif**

| | Mean | Median | Maximum | Minimum | Std. Dev. |
|---|---|---|---|---|---|
| n= 63 | | | | | |
| ROE | 0.151 | 0.149 | 0.380 | 0.002 | 0.070 |
| ROA | 0.035 | 0.034 | 0.095 | 0.012 | 0.014 |
| DEBT | 0.761 | 0.760 | 0.890 | 0.574 | 0.068 |
| AUR | 0.746 | 0.820 | 1.394 | 0.256 | 0.277 |
| ER | 0.027 | 0.026 | 0.051 | 0.007 | 0.012 |
| SIZE | 16.342 | 16.163 | 18.639 | 13.954 | 1.140 |
| RISK | 0.008 | 0.006 | 0.028 | 0.000 | 0.007 |

ROA = Return on Assets; ROE = Return on Equity Assets, DEBT = Capital Structure,
AUR = Asset Utilization Ratio; ER = Expense Ratio; SIZE = Firm Size; RISK = Firm Risk

Table 3 shows that capital structure has no significant effect on firm performance which measured using ROA. This result is consistent with prior research that capital structure has insignificant effect on firm performance (Chadha & Sharma, 2016; Dang et al., 2019; Vuong et al., 2017). Dao & Ta (2020) showed that 26.5% (65 studies) could not prove the effect between capital structure and financial performance. Nevertheless, the capital structure has a significant positive on firm performance which measured using ROE. This result is consistent with prior research that capital structure has a positive effect on firm performance as measured using ROE (eg. Dixon et al., 2017; Fosu, 2013; Vijayakumaran, 2018). Dessí & Robertson (2003) which focuses on 557 firms in the UK during 1967 – 1989 also showed that debt was positively related to firm performance when they did not control for debt endogeneity.

**Table 3. Multiple Regression Result**

| | ROA Model | | | ROE Model | | |
|---|---|---|---|---|---|---|
| **Variable** | **Coefficient** | **t-Statistic** | **Sig.** | **Coefficient** | **t-Statistic** | **Sig.** |
| Constant | 0.083 | 2.672 | 0.010 | 0.140 | 0.993 | 0.325 |
| DEBT | -0.001 | -0.062 | 0.951 | 0.464 | 4.775 | 0.000*** |
| SIZE | -0.003 | -2.543 | 0.014** | -0.022 | -3.813 | 0.000*** |
| RISK | 0.961 | 4.460 | 0.000*** | 2.919 | 3.112 | 0.003** |
| Adjusted R-squared | | 0.239 | | | 0.510 | |
| F-statistic | | 7.500 | | | 22.485 | |
| Prob(F-statistic) | | 0.000 | | | 0.000 | |

Note:
*** significant at the 0.01 level; ** significant at the 0.05 level; * significant at the 0.1 level
ROA = Return on Assets; ROE = Return on Equity Assets, DEBT = Capital Structure; SIZE = Firm Size; RISK = Firm Risk

Vijayakumaran (2015) shows that there is a non-linear relationship between capital structure and firm performance., which when leverage increases and debt capital is not used efficiently to improve performance but is used to take over resources, it will have a negative impact on company performance. However, once the threshold level is reached, further increases in debt capital help improve performance by limiting shareholder behavior through liquidation threats and close monitoring by lenders. In the end, it will have a positive impact on the firm performance.

Similarly, the results also imply that when leverage becomes relatively high, debtholder monitoring incentives increase which in turn makes managers avoid their mistakes and align their interests with shareholder interests and thereby improve firm performance.

**Table 4. Moderated Regression Result**

| | ROA Model | | | ROE Model | | |
|---|---|---|---|---|---|---|
| **Variable** | **Coefficient** | **t-Statistic** | **Sig.** | **Coefficient** | **t-Statistic** | **Sig.** |
| Constant | -0.048 | -0.856 | 0.396 | -0.399 | -1.408 | 0.165 |
| DEBT | 0.090 | 2.237 | 0.029** | 0.924 | 4.213 | 0.000*** |
| AUR | 0.130 | 2.674 | 0.010** | 0.577 | 2.373 | 0.021** |
| DEBT*AUR | -0.153 | -2.547 | 0.014** | -0.704 | -2.318 | 0.024** |

| | | | | | | |
|---|---|---|---|---|---|---|
| SIZE | 0.000 | -0.018 | 0.986 | -0.012 | -1.235 | 0.222 |
| RISK | 0.648 | 2.667 | 0.010** | 1.885 | 1.861 | 0.068* |
| Adjusted R-squared | | 0.276 | | | 0.538 | |
| F-statistic | | 5.718 | | | 15.461 | |
| Prob(F-statistic) | | 0.000 | | | 0.000 | |

Note:
*** significant at the 0.01 level; ** significant at the 0.05 level; * significant at the 0.1 level
ROA = Return on Assets; ROE = Return on Equity Assets, DEBT = Capital Structure, AUR = Asset Utilization Ratio; SIZE = Firm Size; RISK = Firm Risk

Table 4 shows that the AUR moderates the relationship between capital structure and firm performance which measured using ROA and ROE. These results suggest that a high AUR indicates that managers are effective in managing assets for optimal investment. This condition causes agency costs to decrease. This result is consistent with prior research that capital structure has a positive effect on firm performance when agency costs are low. Berger & Bonaccorsi di Patti (2006) stated that a small increase in leverage will reduce agency costs which have an impact on increasing company performance, but large increases in leverage increase agency costs which have an impact on decreasing firm performance.

Table 5 shows that the ER was not found to moderate the relationship between capital structure and firm performance as measured using ROA and ROE. This result is inversely proportional to the results of research (Pandey & Sahu, 2019) which found that the expense ratio increases agency costs which in turn affects the company's capital structure.

**Table 5. Moderated Regression Result**

| | **ROA Model** | | | **ROE Model** | | |
|---|---|---|---|---|---|---|
| **Variable** | **Coefficient** | **t-Statistic** | **Sig.** | **Coefficient** | **t-Statistic** | **Sig.** |
| Constant | 0.153 | 2.562 | 0.013 | 0.382 | 1.369 | 0.176 |
| DEBT | -0.003 | -0.069 | 0.946 | 0.350 | 1.513 | 0.136 |
| ER | 0.452 | 0.300 | 0.765 | -5.160 | -0.736 | 0.465 |
| DEBT*ER | -0.972 | -0.522 | 0.604 | 5.429 | 0.626 | 0.534 |
| SIZE | -0.007 | -3.524 | 0.001*** | -0.030 | -3.211 | 0.002*** |
| RISK | 1.121 | 5.226 | 0.000*** | 3.207 | 3.212 | 0.002*** |
| Adjusted R-squared | | 0.449 | | | 0.503 | |
| F-statistic | | 11.117 | | | 13.565 | |
| Prob(F-statistic) | | 0.000 | | | 0.000 | |

Note:
*** significant at the 0.01 level; ** significant at the 0.05 level; * significant at the 0.1 level
ROA = Return on Assets; ROE = Return on Equity Assets, DEBT = Capital Structure, ER = Expense Ratio; SIZE = Firm Size; RISK = Firm Risk

The Indonesian government's plan to focus more on infrastructure is an opportunity for State-Owned Enterprises (SOEs) in Indonesia specially in construction sector. Joko Widodo, as the President of the Republic of Indonesia stated, despite various inputs, the government decided to focus on infrastructure development in 2015. With the large-scale construction

project, SOEs in construction sector will attempt to achieve an optimal capital structure in order to continue the company's operations.

Table 6 shows that there is a difference in the average capital structure of SOEs in the construction sector, especially in the long-term debt ratio which increased from 0.147 to 0.210. This indicates that the capital structure of SOEs experienced an increase in the amount of long-term debt after the infrastructure development policy. Even though if we look at the total debt as a whole, there is a significant difference in capital structure in which the overall ratio of total debt to total assets decreased from 0.804 to 0.727.

Table 6 shows that there are differences in the means of firm performance before and during the era of President Joko Widodo. This can be seen in the average ROE before and during the administration of President Joko Widodo, which decreased significantly from 0.180 to 0.128. This indicates that the performance of SOEs in the construction sector has decreased following the infrastructure development policy. Although when viewed from the ROA, there is no significant difference in company performance.

**Table 6. T-Test Firm Performance & Capital Structure**

| Kinerja Perusahaan | ERA | Mean | Sig. |
|---|---|---|---|
| ROA | BEFORE | 0.034 | 0.717 |
| | DURING | 0.035 | |
| ROE | BEFORE | 0.180 | 0.004 |
| | DURING | 0.128 | |
| DEBT | BEFORE | 0.804 | 0.000 |
| | DURING | 0.727 | |
| LTD | BEFORE | 0.147 | 0.012 |
| | DURING | 0.210 | |

## CONCLUSION

The purpose of this paper is to explore the moderating role of agency cost on the relationship between capital structure and firm performance of SOEs in construction sector before and during Joko Widodo era. The years 2010 – 2014 were before President Joko Widodo, while the years 2015 – 2019 was during President Joko Widodo. The sampling technique used was purposive sampling with the criteria of companies that published complete. Based on these criteria, the number of samples obtained is 7 SOEs (63 observations).

The results of this study indicate that capital structure has a positive effect on ROE. Vijayakumaran (2015) shows that there is a non-linear relationship between capital structure and firm performance., which when leverage increases and debt capital is not used efficiently to improve performance but is used to take over resources, it will have a negative impact on company performance. However, once the threshold level is reached, further increases in debt capital help improve performance by limiting shareholder behavior through liquidation threats and close monitoring by lenders. In the end, it will have a positive impact on the firm performance.

Furthermore, the asset utilization ratio moderates the relationship between capital structure and firm performance which measured using ROA and ROE. These results suggest that a high asset utilization ratio indicates that managers are effectively managing assets for optimal investment. This result is in line with previous research which states that a small increase in leverage will reduce agency costs which have an impact on increasing company performance (Berger & Bonaccorsi di Patti, 2006).

Last, the results of this study indicate that there are differences in the average capital structure and performance of SOEs in the construction sector before and during the era of President Joko Widodo/ This indicates that the capital structure and performance of SOEs in the construction sector have changed following the infrastructure development policy.

This research is to provide further enrichment related to the problem of inconsistency in the relationship between capital structure and firm performance in agency cost hypotheses. In addition, this study provides an overview of the optimal capital structure, especially for SOEs in the construction sector in Indonesia.

This study used a sample of a relatively narrow that only uses 7 companies with a total of 63 observations, so that further research can expand the study sample. Further research can use other variables such as financial distress and corporate governance to examine the relationship between capital structure and firm performance.

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