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Study of State-Owned Enterprises (SOEs) Profitability in Indonesia 2012-2016 Period

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Abstract: One of the purposes of the establishment of SOEs is to become a source of funding for the state. But unfortunately, the losses and potential bankruptcy is still a business challenge to date. Therefore, the aims of this research to analyze the SOEs' financial performance and the factors that affected profitability. The analysis method used is panel data regression involving 118 financial data companies in the year of 2012-2016. The variables used consisted of return on assets (ROA), total asset growth (TAG), current ratio (CR), total assets turnover (TATO), and debt to equity ratio (DER). After eliminating the outlier data and use other statistical tests, a fixed-model effect (FEM) was obtained. Based on the analysis result, the effect of TAG, CR, and TATO is positive and significant on the ROA. Meanwhile, the effect of the DER is not significant on ROA. This model is able to explain the variation of the dependent variable of 92,40 percent.

Keywords: Profitability; Financial Performance; Panel Regression; State-Owned Enterprise (SOE)

Introduction

Every company was founded to achieve certain business objectives (Zu, 2019). State-owned enterprises (SOEs) as Indonesian government-owned enterprises have an important role as the pillars of the national economy (Asnawi, 2016). It can be seen from the contribution to gross domestic product (GDP) which reached 18.82 percent (Sari, 2013). In addition, SOEs also have specific objectives as a source of income for the state, both in the form of dividends and taxes (Bajo, Primorac, & Zuber, 2018).

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Referring to the achievement of the state revenue realization in 2012-2016, the existence of SOEs has a significant contribution. Consistently, the contributions reach $13,36 \pm 0,25$ percent annually. Even nominally, the government reported that in 2012, SOEs were able to make a contribution of 176 trillion rupiah. The trend increased and became 204 trillion rupiah in 2016 (Ministry of SOEs, 2017).

Behind the satisfying performance of SOEs, the companies were faced with potential losses. In 2012, 16 SOEs recorded a loss of 1,49 trillion rupiah (Arifenie & Prayogo, 2013). This amount increased in 2016, where 22 SOEs faced the loss of 5,6 trillion rupiah (Sawitri, 2017). In terms of numbers, the number of SOEs during the 2012-2016 period declined. The Financial Statistics Report published by BPS-Statistics Indonesia shows that the number of SOEs at 2016 has decreased by 24 companies or 16,90 percent than 5 years ago (BPS, 2017).

Many causes are underlying the close of the SOE. According to the Supreme Audit Agency (BPK), it is caused by mistakes in investment management (Sukmana, 2015). According to the SOE Minister at the time, the bankruptcy also is caused by SOE's inability to adjust to the market changes (Kertiyasa, 2011). Meanwhile, according to an analysis from the Ministry of Finance, it is caused by the low current assets owned (Santoso, 2019).

SOE sustainability becomes very important for the government, because the amount of dividends and taxes will affect the achievement of revenue and realization of state budgeting in the current year (Willemyns, 2016). The government as the main owner of SOE expects that all companies are able to get positive and maximum profits. Therefore, issues related to SOE profitability become one of the focuses of the government and the board of directors. Given the importance of maintaining the financial health of the SOE, an appropriate financial strategy framework is needed (Kochhar, 1997).

Meanwhile, regarding research that specifically examines the financial performance of all SOEs in Indonesia, to the best of the author's knowledge the number of studies is still limited, especially studies that model between asset growth, liquidity, asset turnover, and liabilities to company profitability. Based on it, the SOE profitability study in Indonesia for 2012-2016 needs to be done. Noting the results of studies conducted by previous researchers indicate that there is a clue that SOE profits can be influenced by many variables such as asset growth, liquidity, asset turnover, and liabilities, but with different direction and magnitude.

Literature Review

Profitability

Profit is the main purpose of the establishment of the company to enrich the owners (Hart, 2011). Profit is a key measure of the success of a company because with this profit investors can get returns according to their expectations. Similarly, when a business is not profitable, the investors will bear the risk to go bankrupt (Kithii, 2008).

Profit can be considered as an approach in calculating net revenue and expenses (Muthoni, 2013). Profit is obtained from the company's operational activities through processing input into output by creating economic added value in it (Brege, Nord, Sjöström, & Stehn,

2010). The difference in economic value from sales and production value is the profit from the company's operations (McGuigan, Moyer, & Harris, 2008).

To obtain maximum profit, companies are faced with the challenge of managing finances through appropriate investment and financial policy strategy (Bodie, Kane, & Marcus, 2018). In terms of investment, companies must be able to manage the use of capital in accordance with future prospects. From the financial aspect, companies must be able to manage the adequacy of operational financing through various financing alternatives, both from debt, the use of retained earnings, or the issuance of new shares.

In connection with increasing the company's profit, J.B. Clark in his theory "Distribution in the Profitless: Static State" explains that profitability can change along with changes in several aspects (Cowan, 2016). These aspects consist of: increase in population, capital increase, improvement of production methods, changes in the shape of the company and the efficiency of the production process, and diverse consumer desires.

In addition to the grand theory, there are several other supporting theories that also explain the company's profitability. First, Chang-Soo Kim, et al (1998) state that companies try to increase their liquidity levels to anticipate more promising future investment opportunities. Second, Myers (1984) in his theory of trade-off states that companies will continue to owe to a certain level. Third, John Stuart Mill (in (Alloush, 2016) states that the level of profitability depends on the level of sales. Fourth, Bohm-Bawerk (in (Alloush, 2016) explains that profit is proportional to the amount of capital invested.

Factor Affected the Profitability

A description of several relevant factors that could theoretically affect company profits are as follows:

1. Asset Growth

Kotany (1922) and Bawerk (1930) state that the company's profit can be achieved by the existence of capital. Through a combination of the optimum amount of capital, the production costs can be made efficient so that the profits obtained are optimum. The relationship between assets and profitability, Baumol (1967) argued, that companies with a large capital has a benefit of accessibility to the market. Various financial strategy options can be taken freely by the company when its financial capacity is sufficient. The impact on company profitability also shows that asset growth has a positive effect (Callen & Fernandez, 2019).

2. Liquidity

Liquidity is the speed in converting assets into cash (Ross, Westerfield, & Jordan, 2017). Liquidity becomes quite important for the company, the more liquid the company is, the easier it is to fulfill short-term obligations (Saleem & Rehman, 2011). A good of implementation of liquidity management involves planning and controlling current assets and short-term liabilities effectively, so the inability to meet short-term obligations can be minimized. Through the existence of sufficient liquidity, the continuity of daily operations can be guaranteed (Ibe, 2013). Therefore, liquidity management will affect the company's cash position and profits (Eljelly, 2004).

3. Turnover Assets

Asset management is needed to overcome the operational efficiency. The ratio of turnover assets shows the level of business efficiency in using the assets owned to

generate the revenue and cash flow. Generally, the greater of asset turnover is linear to the better condition of efficiency. In addition, the company is also considered capable of utilizing said assets fully (Okwuosa, 2005).

4. Liability

Liability is an obligation that arises from past transactions that must be paid in the future (Giuzio, Gintschel, & Paterlini, 2018). Increasing the amount of debt indicates the risk which borne the company (Ando, Matsumoto, & Matsumoto, 2017). In the contracting-cost hypothesis theory, it explains that company which has the investment growth opportunities will have a small long-term debt (Myers, Determinants of Corporate Borrowing, 1977).

Methodology

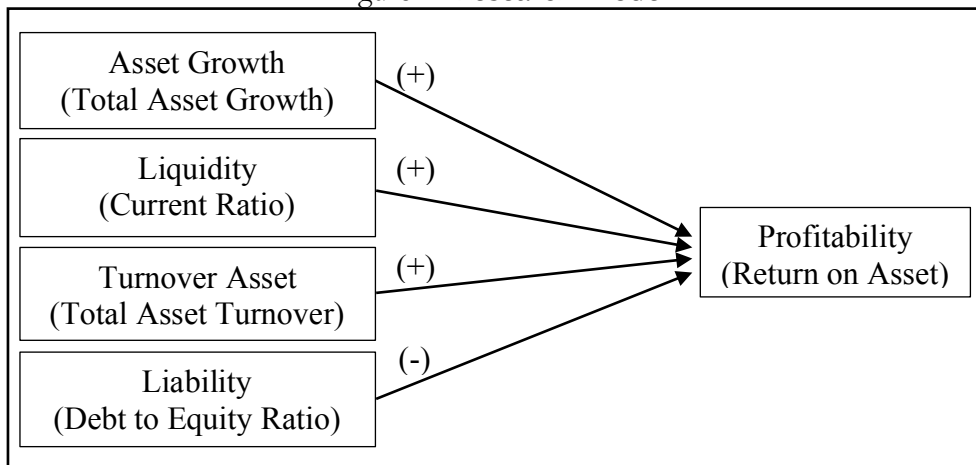
This study is using the secondary data obtained from the Ministry of SOEs. In detail, this observation unit includes 118 companies with data series used from the 2012-2016 period. The analysis method using a quantitative research design that is explanatory (testing hypothesis) by the panel data regression which involves a combination of cross section and time series data (Gujarati & Porter, 2009).

The steps of the analysis are as follows:

- Outlier detection and data repair
- Estimating the suitability of the model between the common effect model, fixed effect model, and random effect model
- Testing the classic assumptions include: normality test, autocorrelation test, multicollinearity test, and homoscedasticity test
- Testing the feasibility of the model include: F test, t test, and determinant coefficients

Meanwhile, the research model was developed to explain the mathematical relationship between asset growth, liquidity, asset turnover, and liabilities to profitability. The framework can be described as follows:

Figure 1. Research Model



Result

Outlier Detection

From 590 observations, 5 observations are missing, 46 observations have univariate outlier, and 17 observations have multivariate outlier. The treatment for the five missing data is inputted based on the average value of each variable. As for the data with the outlier conditions, 2 treatments are applied, viz:

- if the outlier is more than 2 years, the company is deleted from the set data,
- if the outlier is less than 2 or equal to 2 years, the value is inputted using the average of the existing variable.

Modelling

In panel data regression modeling, parameter estimation can be done in three forms of modeling, namely: common effect model (CEM), fixed effect model (FEM), and random effect model (REM). The selection tested using the Chow Test, Hausman Test, and the Breusch-Pagan LM Test. Comparison of estimation results obtained from Eviews is as follows.

First, choose between the common-effect model and fixed-effect model using the Chow test. Based on the results in Table 1., the probability value is 0,0000. The value is smaller than the significance level used in this study is five percent. Based on this, it can be concluded that the fixed-effect model is better than the common-effect model.

Table 1. **The Result of Chow Test**

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7,241664	(107,428)	0,0000
Cross-section Chi-square	557,999538	107	0,0000

The next test is to choose the best model between the fixed-effect model and random-effect models. To find the best model between them, the test used is the Hausman Test. Based on the results of Table 2., the probability value is 0,0000 and smaller than the significance level set at five percent. This concludes that the fixed-effect model is better than the random-effect model.

Table 2. **The Result of Hausman Test**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	31,972087	4	0,0000

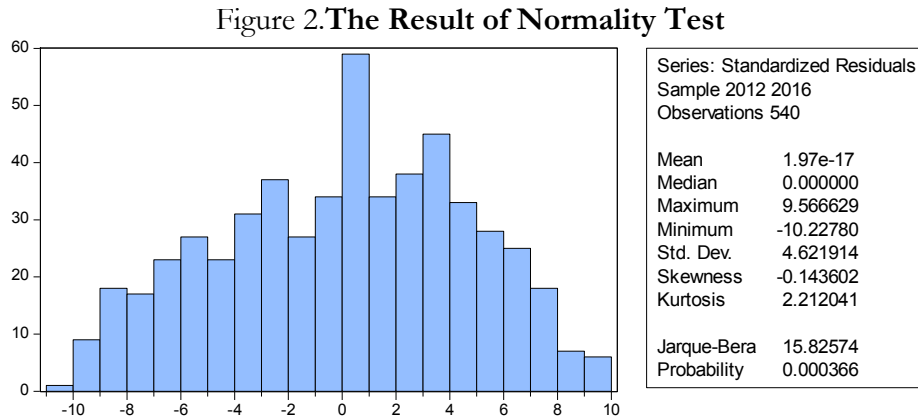
From the results of the two tests show that the fixed-effect model is better than the common-effect model and the rando-effect model so that the Lagrange Multiplier test is no longer needed. The next step is to conduct a classic assumption test consisting of a normality test, an autocorrelation test, a multicollinearity test, and a homoscedasticity test.

Classical Assumption Test

Normality

This test is intended to obtain an overview of the distribution of data to be modeled. Consequences when data sets are not normally distributed, various statistical analysis in

regression cannot be performed. From the results of tests conducted, the Jarque-Bera value of 1165,359 was obtained with a probability score of 0,0000. This shows that the data set used is not normally distributed and can not be carried out to advanced statistical tests such as t test, F test and chi-square test.



However, after looking the distribution of histograms and paying attention to Li, et al. (2012), Pek, dkk. (2018), Smith (2018), serta Schmidt & Finan(2018) about the central limit theorem, this normality assumption can be ignored. It based on the large number of samples used make the normality violate will not have a significant impact on the regression model obtained.

Autocorrelation

Autocorrelation test is intended to determine the existence of error term correlations between time periods. This test is done as one of the ideal conditions for doing regression modeling. When the data is free from autocorrelation, the estimation of parameter values using OLS becomes unbiased and efficient.

Table 3. The Result of Autocorrelation Test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	7.610,007	5.778	0,0000
Pesaran scaled LM	16,037		0,0000
Bias-corrected scaled LM	2,537		0,0112
Pesaran CD	2,037		0,0418

From the test results obtained, overall probability scores below 0,05. This means that the data set has a correlation between the error terms, so the OLS estimation method is no longer recommended for estimating model parameter values.

Multicollinearity

Multicollinearity test is used to determine the existence of correlations between independent variables. In regression, ideally each independent variable is independent and not bound at all. The existence of multicollinearity can cause OLS predictors and variance to be indeterminate. In addition, its existence resulted in researchers being fooled by the suitability of the coefficient of determination (R square) which is quite high, even though it happened to all.

Table 4. The Result of Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1,513085	29,17345	NA
TAG	0,000135	1,82254	1,01765
CR	0,208567	12,81375	1,01552
TATO	2,053642	18,44566	1,00679
DER	3.87E-07	1.20096	1.00981

Based on the test results obtained by the VIF (Variance Inflation Factor), score of all variables is below the specified threshold of 5. This shows that the combination of these variables is free from multicollinearity problems.

Heteroscedasticity

Heteroscedastic test is a test of classical assumptions in regression to determine the inequality of residual variance between observations. When the data set is heteroscedastic, the resulting parameter values will deviate from the actual value. In addition, the results of statistical tests t and F will be misleading.

Table 5. **The Result of Heteroscedasticity Test**

Breusch-Pagan Lagrange Multiplier Panel Heteroscedasticity Test	
Lagrange Multiplier LM Test	1.377,9643
Degrees of Freedom	539,0000
P-Value > Chi2(539)	0,0000
Greene Likelihood Ratio Panel Heteroscedasticity Test	
Likelihood Ratio LR Test	1.099,4596
Degrees of Freedom	539,0000
P-Value > Chi2(539)	0,0000

Based on the test results using the Lagrange Multiplier and likelihood ratios, the probability values are all under 0,05. This shows that the data set experiences heteroscedastic symptoms, so an alternative method besides OLS is needed.

Tabel 6. **The Result of Cross-Sectional Correlation Test**

Breusch-Pagan Test of Independence	
Chi Square	192,578
Degrees of Freedom	10,000
P-Value > Chi2(10)	0,000

Furthermore, the next testing is needed to determine the existence of cross-sectional correlation in the structure of residual variance-covariance which has heteroscedastic. The Likelihood Ratio test used and obtained probability values below 0,05. It gives the conclusion that the structure of heteroscedastic variance-covariance has the cross-sectional correlation. Noting the number of cross sections more than the time series, the estimation method used is the cross-section SUR or PCSE.

The Result of Hypothesis Testing

Simultant Test

Simultaneous hypothesis test is a statistical test that is used to determine the significance of the influence of independent variables on the model together. Based on the estimation results of the model, it shows that the calculated F value of 60,03 with a probability value of 0,0000. This shows that the independent variables that are used together are proven to have a significant effect on the ROA variable.

Partial Test

This partial hypothesis test is a statistical test to determine the significance of the effect of each independent variable on the dependent variable. Based on the estimation results of the model, it shows that the variable growth in assets (TAG), liquidity (CR), and total asset turnover (TATO) has a probability value of 0,0000. Meanwhile, the liability variable (DER) has a probability value of 0,1345. This concludes that of the 4 independent variables used in the model, there are only 3 variables that significantly affect ROA, namely asset growth (TAG), liquidity (CR), and total asset turnover (TATO). While the liability variable (DER) is statistically proven not to have a significant effect on ROA.

Table 7. The Result of t Test

Variable	t-statistic	Prob.
TAG	5,30009	0,0000
CR	5,38149	0,0000
TATO	10,74703	0,0000
DER	1,34012	0,1345

Coefficient of Determination

Based on the processing output of Eviews, it obtained the coefficient of determination (R square) of 0,9396. Meanwhile, the coefficient of determination adjusted (R square adjusted) is 0,9240. This shows that the model formed is able to explain the phenomenon of 92,30 percent.

Formed Models

Noting the results of testing all existing classical assumptions, it is known that the data have violated the assumption of homoscedasticity and autocorrelation. Therefore, parameter estimation using OLS method becomes inaccurate. An alternative parameter estimation that can be done is to use the weighted least squares estimator (Sroeter, 1994). The results of processing using Eviews obtained the following output.

Table 8. The Result of Final Equation Model

Method: Panel EGLS (Cross-section weights)					
Cross-section SUR (PCSE)					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	-3,023120	0,614047	-4,923274	0,0000	
TAG	0,019814	0,004217	4,698420	0,0000	
CR	0,732899	0,143030	5,124074	0,0000	
TATO	6,921295	0,756849	9,144886	0,0000	
DER	0,000575	0,000384	1,499396	0,1345	
Weighted Statistics					
R-squared	0,93964	Mean dependent var	11,9308		
Adjusted R-squared	0,92399	S.D. dependent var	21,0922		
S.E. of regression	5,18674	Sum squared resid	11.514,16		
F-statistic	60,02645	Durbin-Watson stat	2,06795		
Prob(F-statistic)	0,00000				

The results of data processing show that intercept, asset growth variable (TAG), liquidity (CR) and total asset turnover (TATO) have a very significant probability value, which is equal to 0,0000. Meanwhile, the liability variable (DER) shows a probability value of more than 0,05. This shows that intercept and the other three variables are significant in

explaining profitability modeling (ROA). While the liability variable (DER) is not significant enough to explain profitability (ROA) in the model.

Finding

The Effect of Asset growth on Profitability

The results of statistical tests on the total asset growth (TAG) showed a significant and positive effect on profitability (ROA). The coefficient of 0,019814 shows that asset growth of one percent predicted to escalate the return on assets by 0,019814 percent (*ceteris paribus*). This finding was also confirmed by several previous studies, such as those of Nasir (2015), Jayasiri & Sanjaya (2015), Maggina & Tsaklanganos (2012), Tingk, et al. (2014), and Yoo & Kim (2015).

Principally, an increase in the number of assets causes SOEs able to create an economic scale in their production activities. As a result, the amount of output produced by the company will increase with the lower average production costs for each output. However, it is not necessarily that an increase in the number of assets will have a positive effect on ROA. At a certain point, asset growth will reach a maximum condition, where the continuous addition of assets will actually reduce ROA. However, this study has not shown the saturation point of the addition of assets.

The results also confirm to the SOE's board of directors, that business expansion is still possible. However, it is important to need to pay attention to that the marginal cost must be lower than marginal revenue. It is intended that the addition of fixed assets has a positive effect on company profits. Apart from the cost aspect, SOE's board of directors also needs to pay attention to the development of existing markets, both in terms of consumer tendencies and economic growth (or gross domestic product / GDP growth) according to expenditure groups. This is to ensure that efforts to increase the number of assets in the context of increasing production capacity can be responded positively by the market so that the risk of loss due to non-absorption of output can be minimized.

The Effect of Liquidity on Profitability

The liquidity ratio shows a company's ability to fulfill its obligations in the short term. The statistics test results show that the variable liquidity (CR) is significant and positive in influencing the profit (ROA). A coefficient of 0,732899 indicates that an increase in the company's ability to pay short-term increases by one point, the ROA will increase 0,732899 percent (*ceteris paribus*). These findings are also supported by the results of previous studies, such as those conducted by Rahmiyatun & Nainggolan (2016), Alshatti (2015), Madushanka, dkk (2018), Hongli, dkk (2019), dan Nurlaela, dkk (2019).

In the current SOE context, the existence of current assets has a significant role. Therefore, SOE's board of directors needs to pay close attention to the company's liquidity performance. The low current assets directly affect the company's low ability to meet short-term obligations. As a result, the risk of disruption of the production process is possible to occur, so that the ROA of SOEs is threatened to decline.

Even though the ability of liquidity has a positive impact, it does not mean that SOEs absolutely need to increase their liquidity ratios excessively. The existence of surplus and

useless current assets will precisely give an impact on the management of unproductive assets. Such actions can have a negative effect on profitability.

The threshold for the reasonableness of the liquidity ratios required by each company may be different, depending on the type of company and its ability to convert various assets into cash. However, one of the references that can be used is the formulation proposed by Kontus & Mihanovic (2019). When the amount of current assets exceeds the value of the cost of financing excess cash multiplied $(1 - \text{profit tax} / 100)$, then the current asset should be invested. Another case when the value of current assets is less than the value of the cost of financing excess cash multiplied $(1 - \text{profit tax} / 100)$, then the current asset is retained. Meanwhile, for the banking sub-sector, it is also necessary to refer to Bank Indonesia Regulation Number 20/3/PBI/2018 relating to the statutory reserve requirement.

The Effect of Asset Turnover on Profitability

The statistical test shows that asset turnover (TATO) on SOE has a positive and significant effect on profits (ROA). The coefficient value of 6,9211295 means that an increase in efficiency in the use of assets by one point, the profit (ROA) obtained by the company will increase by 6,92 percent (*ceteris paribus*). Similar conclusions were also made by previous researchers such as Hirsela (2018), Sutanto & Pribadi(2012), Warrad, dkk (2015), Prakoso, dkk (2016), dan Nurlaela, dkk (2019).

In the context of SOEs in Indonesia, TATO is quite strategic in influencing the number of profits obtained. Therefore, it becomes quite important for a manager to manage company assets as optimal as possible. Various efforts can be made to increase asset turnover, including:

1. Increase revenue from the sales side by improvising product quality (Beinabaj, Soleimani, & Rashidi, 2013) and implementing an appropriate marketing strategy (Locket, 2018).
2. Increase asset efficiency through the use of appropriate production technology (Hanggraeni, 2014), improve human resource capabilities (Beinabaj, Soleimani, & Rashidi, 2013), as well as the application of digitalization in every stage of the company's business processes (Chen & Srinivasan, 2019).
3. Perform inventory management appropriately by considering aspects of supply availability in the market and commodity price developments (Shen, Deng, Lao, & Wu, 2016).

The Effect of Liabilities on Profitability

Debt and equity are a combination of funding sources used by SOEs in shaping assets which used to support all production activities. The size of the proportion of debt to equity reflects the company's capital structure. The results of statistical tests on the liability (DER) show that the effect is not significant on ROA. This is shown by the DER variable probability value of 0,1345. Thus, it can be concluded that the increase in debt to equity ratio statistically cannot be proven to have a significant effect on profitability (ROA). These results contradict to the pecking order theory (Oktavina, Manalu, & Yuniarti, 2018) related to the order of priority funding sources, namely: retained earnings, debt, and equity/issuance of new shares. This finding also contradicts the conclusions of the results of a study conducted by Pamungkas & Fuad (2013), Ulzanah & Murtaqi (2015), and Murugesu (2013) which states that debt negatively affects company profits.

However, this conclusion is supported by the results of several previous studies, such as those conducted by Baum, et al (2006), Sutrisno, et al (2017), and Sukasa, et al (2017) which states that the level of debt does not affect a company's profitability. In fact, a study conducted by Kebewar (2012) shows that there is no linear or non-linear relationship between the level of debt and corporate profits.

The explanation for this case, the preference for the use of debt or equity will not affect the company's profitability. The use of the debt (with interest expense) or own capital (with tax expenses), both of them have no significant difference to support the company activities. This also confirms that the addition of the cost of capital from the use of own capital is not much different compared to the cost of capital due to debt.

Nevertheless, SOE managers need to pay attention to various aspects when they want to determine a source of financing policy. Referring to the trade-off theory (Culata & Gunarsih, 2012), SOEs need to consider the amount of tax that is borne, agency costs, and the costs of financial distress. In addition, when efforts to save taxes on the cost of financial difficulties have reached the optimum point, then financing sourced from debt should be stopped and switch to the use of retained earnings or the issuance of new shares.

The Final Modelling of Profitability

The final formed for modeling the SOE's ROA is the fixed effect model (FEM) regression, which is written as follows:

ROA =	-3,023	+	0,020 TAG+	0,733	CR	6,921 TATO
				+		
t-stat.	-4,9233		4,6984	5,1241		9,1449
Prob.	(0,000)		(0,000)	(0,000)		(0,000)

Generally, the model is able to explain 92,40 percent of the ROA variance in SOEs. While the other 7,60 percent is explained by other variables. Nevertheless, this modeling has a general correction for each type of company. When you want to estimate the value of ROA in a particular company, then the value of intercept/constant needs to be corrected with an individual effect score.

Conclusion

Based on the results of data analysis and discussion, it can be concluded as follows:

- Total asset growth (TAG) statistically has a positive and significant effect on BUMN profit (ROA). The addition of total assets aimed at increasing the amount of output causes the average production cost of each output to be lower so that the economies of production at the company can be achieved. In addition, the addition of assets to SOEs also has not shown a saturation point that can affect ROA decline.
- The level of liquidity represented by the current ratio (CR) has a positive and significant effect on SOE profit (ROA). The existence of the current assets is very much needed to pay for production costs and fulfill other short-term obligations so that the sustainability of the company's operations can be guaranteed and the production process is not hampered. The existence of current assets in SOEs also

has not shown any excess cash that can have a negative effect on profitability. In determining the liquidity ratio, BUMN needs to pay attention to the Kontus-Mihanovic formulation as well as the minimum statutory reserve requirements (specifically for SOE banking subsector) from Bank Indonesia.

- Effectiveness and efficiency in asset management measured through the indicator of total asset turnover (TATO) has a positive and significant impact on SOE profitability (ROA). This shows that the ability of management to manage assets professionally as reflected in the total products sold in a linear fashion will positively influence the increase in profitability. The effectiveness and efficiency of asset management will also improve along with various relevant management efforts.
- Preference for the use of debt and own capital as represented by the debt to equity ratio (DER) indicator does not have a significant effect on SOE profitability (ROA). This indicates that the use of alternative sources of financing, both from debt and own capital, does not show any significant difference in creating profits for SOEs. In addition, the magnitude of the addition of the cost of capital between options for the use of own capital and debt is also not much different. However, the alternative selection of financing sources needs to be corrected when efforts to save tax on the cost of financial difficulties have reached their optimum point. Under these conditions, SOEs need to stop financing sources from debt and switch to the use of retained earnings or the issuance of new shares.

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