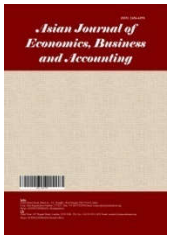

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Factors Affecting the Profitability Management of Indonesian State-Owned Enterprises: Cash Flow from Operating as a Moderating Variable

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Authors' contributions

This work was carried out in collaboration with all authors. Author SYL designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors EM and SM managed the analyzes of the study. Author VH managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

This research aims to analyze the phenomena of the factors affecting the profitability management of state-owned enterprises. The purposive sampling method was used in data collection by selecting seven state-owned enterprises during the last eleven years and using multiple regression analysis techniques. The findings of this study are that subsidy has a negative and significant effect on profitability management, which means that the more it is subsidized, the lower the profitability management indicator will be, mainly because of the decreasing motivation and challenges with profitability orientation. The firm size variable has a negative and significant effect, which means that the larger the company scale, the lower the profitability of management because the task for services requires economic orientation or not financial-based.

Keywords: Profitability management; financial performance; capital structure.

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1. INTRODUCTION

The purpose of this study is to analyze the phenomenon of state-owned enterprises that are still dependent on government funding assistance which has been provided through subsidies and additional capital. When viewed from a business aspect with a large enough business scale, the company should be able to operate efficiently, because it has a large market share, controls technology, has sufficient number and quality of human resources so that the company can be managed independently and apart from a dependency on funding from the government. With the resources owned by state-owned enterprises, there is an opportunity to increase operating efficiency or reduce the cost of production at an optimal cost structure. The phenomenon that occurs in state-owned enterprises is not only faced with cost efficiency but also against the price level or tariff that has not reached its financial feasibility level. This is where the importance of studying profitability management, namely company management must manage the available resources with all the authority it has to produce an optimal level of profitability, namely how to achieve maximum profit or minimize the cost per unit of its product so that even if it has to suffer a loss, the loss is minimum. If this is not done by company management, in the long run, the government will be more burdened, not only the subsidy that must be borne by state finances but also by the increasing debt burden of state-owned enterprises that must be borne by the government as a shareholder. This phenomenon illustrates that state-owned enterprises do not have the liquidity capacity to pay debts because operating expenses alone are difficult to meet and require subsidies, while companies annually increase debt for investment so that in the long term the financial condition of state-owned enterprises is getting worse. In the short term, it is still possible to make payments due to using additional debt, but in the long term the amount of debt that matures is greater and the amount of subsidies is increasing, so that the financial condition is further away from the expected level of profitability.

This study examines the main variables that affect the profitability management of state-owned enterprises, and analyzes their role in determining the level of company profitability, thereby contributing to the decision-makers of state-owned enterprises. A very strategic factor that plays a role in company profitability is the occurrence of a large negative profitability gap between revenue and financing, so that hard work is needed for company management to achieve the expected level of profitability. The obstacle faced by company management is that the performance of financial reports published by state-owned enterprises is that every year it is declared healthy and obtains a level of profitability. So that efforts to make price adjustments experience obstacles because stakeholders think the company is not a problem in its financial condition. This phenomenon occurs because subsidies received from the government are reported as revenue in the income statement so that the company is declared profitable. This phenomenon should have happened the other way around, namely, the company suffered losses if the receipt of government assistance was reported as additional government participation capital, and the company had sufficient reason to adjust the prevailing price until it reached a feasibility level that was able to meet the company's operational costs. If this can be realized, then the burden of subsidies borne by the government can be gradually reduced.

This study also examines the operating efficiency variable to show the achievement of operational performance that can support the achievement of the company's profitability level. Company management plays a very important role in controlling profitability management indicators by paying attention to all related components, to be able to produce optimal profitability. Other variables related to profitability management that will be examined in this study are operating cash flow, firm size, leverage, and earning management.

Cash flow operating is a reference in maintaining short-term financial stability because it is related to the cash cycle used to finance company operations and settle short-term financial obligations that are due, using proceeds from sales, receivables, short-term debt receipts and subsidies from the government. If there is an imbalance in cash inflow and operational cash outflow, the company will experience liquidity problems and affect third party trust and fulfill the debt covenant agreed with the lender. Cash flow as a variable that affects the profitability management indicator, because it is related to the smooth running of financing and increasing income, which means that the higher the income or the smaller the operating expenses, the better the operating cash flow and the company's

profitability. The cash flow operating variable was chosen as the moderator variable to test its role in strengthening or weakening the effect of operating efficiency and subsidy on profitability management. If the cash flow operating variable has a significant effect, the company management must anticipate the components related to the operating cash flow statistics, so as not to harm weakening the level of profitability management. The cash flow operating variable was chosen as the moderator variable to test its role in strengthening or weakening the effect of operating efficiency and subsidy on profitability management. If the cash flow operating variable has a significant effect, the company management must anticipate the components related to the operating cash flow statistics, so as not to harm weakening the level of profitability management. The cash flow operating variable was chosen as the moderator variable to test its role in strengthening or weakening the effect of operating efficiency and subsidy on profitability management. If the cash flow operating variable has a significant effect, the company management must anticipate the components related to the operating cash flow statistics, so as not to harm weakening the level of profitability management.

This study uses the variable control firm size, leverage, and earning management as variables used to control the influence of other variables that are not considered in this study. Firm size has a role in achieving profitability, especially because large-scale companies tend to do business related to the livelihoods of many people so that the company's profitability conditions experience problems because prices are still controlled by the government, even operating even though they are at a loss. There is a tendency that the larger the firm size, the more difficult it is to obtain a decent level of profitability, so a program is needed to improve the company's profit management indicators. Meanwhile, other control variables such as leverage affect profitability because the investment made by companies relies on the use of long-term debt. After all, government capital is limited in number and is diverted to subsidies. The use of financially viable investment debt will increase the profitability management indicator, on the other hand, if the investment only uses an economic approach that prioritizes externality or social benefits, financial interests will be neglected, so that management profitability will decline. This study will reveal how much the role of this leverage factor affects management profitability. as well as providing information to company management about the level of significance of the influence of the leverage variable on the level of company profitability. Another control variable used in this study is earnings management based on real activities, due to the consideration that accruals-based earning management is limited in its implementation because the accounting system that is being treated has narrowed the opportunity to arrange accruals transactions to influence financial statements. In contrast to real activities-based earnings management, in practice it is easier for management to carry out because it is related to routine activities such as increasing income, reducing discretionary costs, and increasing production volume. This can be done without significant obstacles, but it is likely to succeed in improving the profitability management indicators only in the short term. In the long term, the practice of real activities-based earnings management contains risks, especially to operating cash flow, and will create a bigger loss so that profitability management will fail.

Research by Zeithaml [1] found that profitability is influenced by various factors, and to control its achievement, company management needs to pay attention to the main variables that affect profitability, then take the necessary steps towards variables that have a significant effect on profitability. The variables that are focused on in this study are mainly those related to sales and costs that shape profitability.

In connection with the description above, this study is motivated to provide information about the factors that affect the profitability management indicators of state-owned enterprises, with the hope that it can provide input for company management and shareholders or the government in the decision-making process related to policies that can cause variable changes. Independent, moderator variables and control variables, and their relationship with the achievement of the level of company profitability. And based on these phenomena and motivations, the main problems in this study are (a) How does operating efficiency affect the profitability management of state-owned enterprises? (B) How does subsidy affect the profitability management of state-owned enterprises? (c) How does cash flow operating affect the profitability management of state-owned enterprises? (d) Does cash flow operating strengthen or weaken the relationship between operating efficiency and profitability

management of state-owned enterprises? and (e) Does the capital structure strengthen or weaken the relationship between subsidies and the profitability management of state-owned enterprises? As for the benefits or contributions expected from this research, it is useful in developing knowledge, especially for the profitability studies carried out by company management, providing input in the decision-making process carried out by company management, and becoming a reference for practitioners and future research, especially about with profitability management of state-owned enterprises.

2. LITERATURE REVIEW, HYPOTHESES DEVELOPMENT AND FRAMEWORK

2.1 Agency Theory

The theory underlying this research is agency theory put forward by Jensen and Meckling [2], who states that in an agency relationship there is an assignment contract from the principal as the owner of the company to the agent as the manager of the company to carry out a job, namely running the company with maximum results. The owner of the company or the principal provides the amount of authority needed by the agent so that it can make decisions in the interests of the principal. This study is relevant to agency theory, namely company management as an agent trying to manage the company to achieve a certain level of profitability to provide benefits for shareholders and improve services to the community. This means that agency theory provides the basis that management must give priority to the interests of owners, ease the burden of subsidies through efforts to improve operational performance, manage cash flow operations in a balanced and planned manner accurately, and avoid earning management practices that can affect the quality of financial reports. The management in its task of developing the company through long-term debt financing must take into account the company's liquidity capacity so as not to burden the principal in the future.

2.2 Profitability Management

Profitability management as the dependent variable measured based on the achievement of profitability as in Zeithaml [1] which is more focused on variables related to sales and cost structure as the main variables that shape the level of company profitability. The study found that the factors that influence the company's profitability are the optimal achievement of sales targets, efforts to reduce the cost of a product to a minimum, to obtain the expected profitability. In the event of a failure in the management of the two components of the variable, the profitability target is difficult to achieve optimally. This is where the role of profitability management is to focus on managing components related to operating efficiency, namely reducing operating costs to a minimum without disrupting the smooth running of the business, and increasing revenue through various marketing strategies so that customer satisfaction is maintained.

2.3 Operating Efficiency

This variable is one of the determinants of profitability achievement because it is related to the two main components that make up profitability, namely revenue, and cost structure with a measure of the efficiency of the comparison of costs to income. This comparison shows that the smaller the cost to income ratio, the higher the efficiency, which means that it will increase the company's profitability. This is in line with research Zeithaml [1] which focuses more on the components that make up sales and cost structures as determinants of company profitability. Based on this view, this study proposes the following hypothesis H1.

H1: Operating efficiency has a negative and significant effect on the profitability management of state-owned enterprises.

2.4 Subsidy

Subsidy aims to help ease the burden on the company to meet the targets set by shareholders. In the research of Dinar and Yaron (1992), Schreiner [3] states that subsidies are intended to provide support for research and development that can create innovations that in turn increase sales and increase company profitability. This study analyzes the role of government subsidies in encouraging national economic growth through state-owned enterprises, although the impact on the achievement of profitability is relatively small or negative. González [4] in his research found that the negative profitability gap (NPG) or the negative difference between the company's revenue and operating costs, is the basis for determining the number of subsidies. So that it can be a driving force for the progress of innovation for the company. Without this subsidy,

it will be difficult for the company to finance its operational needs and it will end up with bigger losses that have a broad impact on national business development. This study examines the source of funding for state-owned enterprises from shareholders to improve the company's profitability management and fulfill the demands of services to support socio-economic development and community welfare. Based on the role of subsidies in the profitability management of state-owned enterprises, this study proposes the following H2 hypothesis. Hence companies find it difficult to finance their operational needs and end up with increasingly large losses that have a broad impact on national business development. This study examines the source of funding for state-owned enterprises from shareholders to improve the company's profitability management and fulfill the demands of services to support socio-economic development and community welfare. Based on the role of subsidies in the profitability management of state-owned enterprises, this study proposes the following H2 hypothesis. Hence companies find it difficult to finance their operational needs and end up with increasingly large losses that have a broad impact on national business development. This study examines the source of funding for state-owned enterprises from shareholders to improve the company's profitability management and fulfill service demands to support socio-economic development and community welfare. Based on the role of subsidies in the profitability management of state-owned enterprises, this study proposes the following H2 hypothesis. and fulfill service demands to support socio-economic development and community welfare. Based on the role of subsidies in the profitability management of state-owned enterprises, this study proposes the following H2 hypothesis and fulfill service demands to support socio-economic development and community welfare. Based on the role of subsidies in the profitability management of state-owned enterprises, this study proposes the following H2 hypothesis.

H2: The subsidy has a negative and significant effect on the profitability management of state-owned enterprises.

2.5 Cash Flow Operating

Research Burgstahler and Dichev [5] found that there is a positive relationship between operating cash flow and the level of company earnings or profitability. Therefore, management needs to optimize cash flow management to smooth the company's operations, so that it can achieve the expected level of profitability. Based on this view, this study proposes the following hypothesis H3.

H3: Cash flow operating has a positive and significant effect on the profitability management of state-owned enterprises.

2.6 Moderating Variable (Interaction Variable)

Baron and Kenny [6] in their research suggest that the moderating variable is determined following empirical theory or facts and rational considerations. Referring to the phenomena faced in this study, cash flow operating as a moderating variable is chosen which strengthens the effect of the independent variables operating efficiency and subsidy on profitability management. Based on this view, this study proposes the following hypothesis H4.

H4: Operating cash flow strengthens the effect of operating efficiency and subsidy on the profitability management of state-owned enterprises.

2.7 Control Variable

The control variable is a variable that is controlled or made constant so that the influence of the independent variable on the dependent variable is not influenced by external factors that are not examined. The control variables used in this study are firm size, leverage, and earning management with the consideration that these three variables have been used in previous studies as variables that affect the company's profitability. Sharma and Kumar [7] in their research suggest that firm size and leverage have a significant effect on company profitability. Research Abor [8] found that leverage harms the profitability of companies listed in Ghana, which means that increased use of debt to finance company operations can reduce the level of expected profitability. Cornett, Marcus and Tehranian [9] in their research suggest that earning management can be used to influence company performance, especially in achieving certain profitability, so that earning management practices are necessary. constrained by well-designed corporate governance arrangements. Scott (2012) in Taco and Ilat (2016) suggests that earning management is a practice carried out by choosing policies according to accounting standards to maximize the company's market

value. Meanwhile, research by Roychowdhury [10] states that the practice of earning management based on real activities is carried out by increasing sales, reducing discretionary expenses, and increasing production volume to reduce the average cost per unit of production.

2.8 Framework

Based on previous theory and research, the conceptual framework that explains the relationship between the independent variable, moderating variable, and control variable with the dependent variable (Y) can be presented in the following figure. Operating efficiency (X1) and subsidy (X2) as independent variables affect profitability management (Y), with cash flow from operating (X3) as a moderating variable that can strengthen or weaken the relationship between independent variables X1 and X2 with the dependent variable profitability management (Y). To avoid bias in the regression calculation if it is not taken into account in the analysis model of this study, several variables are used as control variables, namely firm size (X4), leverage (X5) and earning management (X6).

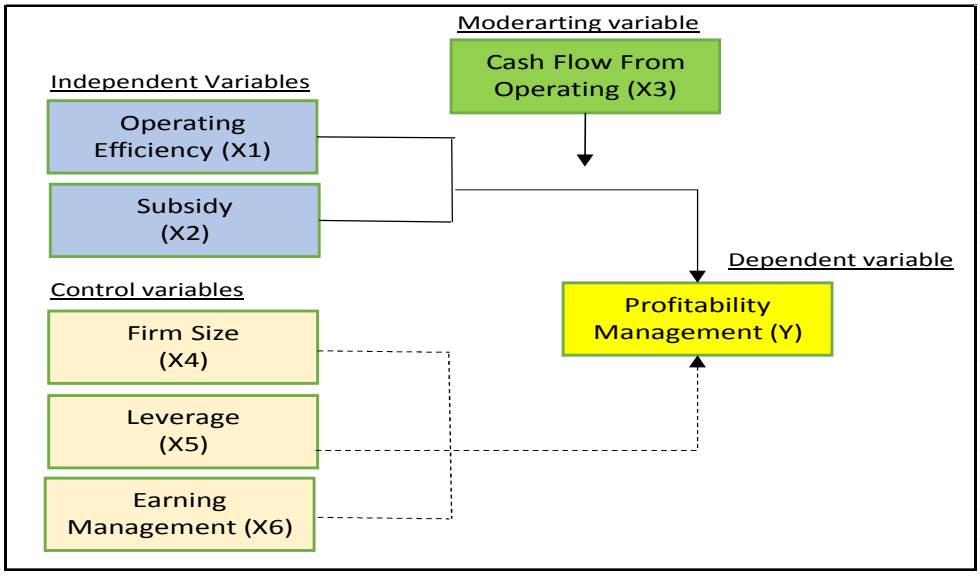

Fig. 1. Factors affecting the profitability management of SOE

3. METHODS

3.1 Sample Selection

This study uses a purposive sampling method as research Aminullah Assagaf, Yusoff, & Hassan [11], A. Assagaf [12], A. Assagaf, Sirat, & Salmiaty [13], Nur Sayidah, Assagaf, & Possumah [14], N. Sayidah & Assagaf [15] and A. Assagaf & Yunus [16], namely determining a sample that is deemed appropriate to the objectives and problems studied, namely related to the profitability management of state-owned enterprises. The selected sample was seven state-owned enterprises with a certain business scale, covering broad socio-economic aspects of life and affecting national economic progress. The selected SMP can represent the population of state-owned enterprises as a whole to explain the phenomenon of profitability management being faced. This study uses panel data consisting of time series for the last 12 years or 2005 to 2016 with only 11 years of observation because some variables are measured based on changes between times, so the data used in the regression analysis is 77 company-years.

3.2 Variable and Measurement

To analyze the problems faced as the phenomenon of state-owned enterprises described earlier, this study uses several variables, namely the dependent variable profitability management, the independent variable operating efficiency and subsidies, the moderating variable operating cash flow, the control firm size variable, leverage, and earnings management.

3.3 Profitability Management

The achievement of the level of profitability has become the center of attention of management and company owners to fulfill their respective interests so that to achieve it optimally, it is necessary to manage the components related to the formation of expected profitability. This research analyzes the profitability management variable by taking into account the various factors that influence it so that state-owned enterprises can achieve the targets expected by the owners, management, employees, government, and other stakeholders. The success in managing profitability management will be reflected in the achievement of better growth rates over time. A significant increase in profitability indicates the success of company management. So that a more comprehensive analysis is needed of all components or factors that affect the achievement of optimal profitability. For analysis, profitability management (Yit) is measured based on the growth of profitability period (t) compared to period profitability (t-1), as shown in the study. Bercovitz, Mitchell (2007) in Assagaf [17,18,19] below.

$$Y_{it} = \frac{Net\ Income\ (t) - Net\ Income\ (t-1)}{Net\ Income\ (t-1)} \quad (1)$$

3.4 Operating Efficiency

The operation efficiency variable (X1it) describes the level of comparison of the amount of cost per revenue earned by the company, which means that the smaller this ratio the better or the smaller the costs incurred to earn per rupiah of income This also means that this ratio affects the level of profitability, so that management must pay attention to this ratio as a variable that affects the company's goals in achieving the expected profitability targets. The measurement of this variable is based on changes in costs period (t-1) to period (t) compared to changes in income from the period (t-1) to period (t) as used in Vennet's research, R [20] with the following formulation.

$$X1_{it} = \frac{Operating\ cost\ (t) - Operating\ cost\ (t-1)}{Revenue\ (t) - Revenue\ (t-1)} \quad (2)$$

3.5 Subsidy

The subsidy variable is the funding received from the government as a result of a deficit in cash inflow on cash outflow, which is because the cost of production is greater than the selling price. To avoid liquidity problems, the government as a shareholder provides operational funding assistance. However, this assistance is only limited to operational needs and is not sufficient to meet investment needs and debt repayment that is due. In the short term, this phenomenon can be overcome by management through efforts to find new loans to pay a long-term debt, but the amount of debt is getting bigger because it is also used for investment so that the amount of debt increases from time to time. In the long run, This condition will get worse if shareholders do not anticipate to provide wider powers and targets for self-financing by state-owned enterprises. Company management should provide support in various alternative solutions to the government as shareholders so that the subsidy can be gradually reduced in number until finally they no longer expect funding assistance from the government. The measurement of the subsidy variable is based on the amount of funding received from the government according to the large gap between costs and sales, known as the price gap, then compared to the number of costs incurred for operations, as Company management should provide support in various alternative solutions to the government as shareholders so that the subsidy can be gradually reduced in number until finally they no longer expect funding assistance from the government. The measurement of the subsidy variable is based on the amount of funding received from the government according to the large gap between costs and sales, known as the price gap, then compared to the number of costs incurred for operations, as Company management should provide support in various alternative solutions to the government as shareholders so that the subsidy can be gradually reduced in number until finally they no longer expect funding assistance from the government. The measurement of the subsidy variable is based on the amount of funding received from the government according to the large gap between costs and sales, known as the price gap, then compared to the number of costs incurred for operations, put forward Doug Koplow (2009) in Assagaf [19] below.

$$X2_{it} = \frac{Biaya\ Penyediaan - Nilai\ Penjualan}{Biaya\ penyediaan} \quad (3)$$

As a comparison to previous studies, namely Dinar and Yaron (1992), Schreiner [3] using the SDI standard or subsidy dependence index which is formulated below.

$$Standard\ SDI = \frac{Subsidy}{Revenue} \quad (4)$$

The subsidy amount is calculated as follows.

$$S = r.E + D\ (m - c) + K - AP \quad (5)$$

Where: SDI: subsidy dependence index, S: subsidy received, r: opportunity cost, E: average equity, D: average soft debt, m: the opportunity cost of soft debt for the market, c: rate paid for soft debt, K: a sum of revenue and discount, AP: accounting profit.

Research González [4] measures the subsidy variable known as a negative profit gap or NPG measured by the following formula.

$$NPG = Revenue - Cost \quad (6)$$

The phenomenon of subsidies for state-owned enterprises tends to be greater than the NPG so that the profitability performance shows a favorable position. If subsidies are only given based on NPG, then the income statement position will result in zero profit and loss and do not have excess funds to pay debts that are due and are unable to invest with their funding.

3.6 Cash Flow Operating

The variable cash flow operating or CFO (X3it) includes cash inflows and cash outflows related to transactions of income, expenses, current assets, and current debt reported in an accounting period. This study uses annual period data as reported in the financial statements that have been audited by an independent auditor from a public accounting firm. The measurement of the CFO variable is based on the change in CFO period (t-1) to period (t), then divided by the period CFO (t-1) as used in the study Rayburn (1986) the following.

$$X3_{it} = \frac{CFO\ (t) - CFO\ (t-1)}{CFO\ (t-1)} \quad (7)$$

3.7 Firm Size

The size variable shows the company's capacity which can be seen through the total value of assets owned by the company according to the year-end financial statements. Measurement of variable firm size (X4it) is carried out based on the logarithm of total assets recorded in the financial statements at the end of the observation period, as researched by Capon, Farley, Hoenig (1990) in Assagaf [17,198,19,12] which is formulated as follows.

$$X4_{it} = Log\ (Total\ Assets) \quad (8)$$

3.8 Leverage

Leverage as a control variable that describes the ratio of total debt to total equity in the financial position statement observation period. This research is primarily intended to determine the role of debt financing used for operational activities and corporate investment activities. Financially, financing with debt provides financial benefits to shareholders, because additional debt funding can generate returns without having to add to the model itself so that dividends per share will increase. Capital funding itself is also an important role in company operations, especially in strengthening the operating cash flow position, avoiding the obligation to pay debts and interest expenses. The leverage variable (X5it) was measured using the formulation as follows Pratheepkanth [21] in Assagaf [18,19], the following.

$$X5_{it} = \frac{Total\ Debt}{Total\ Equity} \quad (9)$$

3.9 Earning Management

Earning management control variables based on real activities are based on earning management practices that use opportunities for routine activities that can be used to influence financial reports, resulting in sound financial reports. The practice of real activity earning management is carried out in a pattern of increasing the number of sales, increasing production, and reducing discretionary expenses. This variable is measured using an approach Roychowdhury [10] in Assagaf [18,19], namely real activities earning management is calculated based on the residual amount of the operating cash flow function (ACFO), residual production costs (APROD) and residual discretionary expense (ADEXP) with the following formulations as AREAL or X6it this.

$$X6_{it} = AREAL = ACFO + APROD + ADEXP \quad (10)$$

Where: AREAL = abnormal or residual cash flow operating, abnormal production costs and abnormal discretionary expenses; ACFO = residual operating cash flow; APROD = residual production costs; ADEXP = residual from discretionary expense (DEXP) expense function.

To calculate the residual or abnormal of the CFO, PROD, and DEXP functions, the following regression equation is used.

$CFO_t / A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2(\Delta S_t / A_{t-1}) + e_t$ (11)

$PROD_t / A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2(\Delta S_t / A_{t-1}) + \beta_3(\Delta S_{t-1} / A_{t-1}) + e_t$ (12)

$DEXP_t / A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta (S_{t-1} / A_{t-1}) + e_t$ (13)

Where: A.= total assets; S = total sales; e = error

3.10 Research Models

Based on the proposed hypothesis, this study uses the following liner analysis, regression model.

Model for H1, H2

$Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \beta_5 X5_{it} + \beta_6 X6_{it} + e_{it}$ (14)

Model for H3 and H4

$Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \beta_5 X5_{it} + \beta_6 X6_{it} + \beta_7 (X1.X3)_{it} + \beta_8 (X2.X3)_{it} + e_{it}$ (15)

Sensitivity Model for H3 and H4

$Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + e_{it}$ (16)

Where:

Y_{it}: profitability management, $X1_{it}$: operating efficiency, $X2_{it}$: subsidy, $X3_{it}$: cash flow operating, $X4_{it}$: firm size, $X5_{it}$: leverage, $X6_{it}$: earning management, β0: constant, β1… β8: coefficients, $_{it}$: error

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics and Correlation Matrix

4.1.1 Descriptive statistics

The data structure is as shown in Table 1, namely the dependent variable profitability management or Y starting from the lowest -12.542 to the highest 0.897 with an average of -1.599 and a deviation level of 3.851 from the average value. This Y variable data is concentrated close to the maximum value and the high level of fluctuation exceeds the average value.

The data structure of the independent variable operating efficiency or X1 starts from the lowest 0.605 to the highest 1.518 with an average of 0.965 and a standard deviation of 0.254. This variable data is concentrated in the range close to the middle value between maximum and minimum with a relatively low fluctuation compared to variable Y. The data structure of the independent variable subsidy or X2 is ranging from the lowest 0.000 to the highest 0.756 with an average of 0.200 and a standard deviation of 0.355. This variable data is concentrated in the range close to the minimum value with a relatively low fluctuation compared to variable Y.

The data structure of the independent variable and simultaneously as a moderating variable for operating cash flow or X3 starts from the lowest 0.007 to the highest 0.756 with an average of 0.143 and a standard deviation of 0.146. This variable data is concentrated in the range close to the minimum value with a relatively low fluctuation compared to variable Y and other independent variables. Meanwhile, the data structure of the control firm size or X4, leverage or X5 and earnings management or X6 variables in general, the data is concentrated in the range close to the minimum value and fluctuates relatively low, except for leverage or X5 which has the highest standard deviation compared to other variables.

4.1.2 Correlation matrix

The correlation coefficient that describes the degree of relationship between variables as shown in Table 2, namely the dependent variable profitability management or Y has a negative and significant correlation with the operating efficiency variable or X1 with a coefficient of -0.817 ** which means that this variable has a strong relationship or changes in the dependent variable Y can be explained by changes in X1 about 81.7% the remaining 18.3% is explained by other variables. The subsidy independent variable or X2 has a negative and significant correlation with the dependent variable profitability management or Y with a coefficient of -0.894 ** which means that the relationship between these two variables is strong or changes in variable Y can be explained by changes in variable X2 around 89.4%, the rest 10.6 % explained by other variables.

The independent variable, as well as the operating cash flow variable or X3, has a positive but insignificant correlation with the dependent variable profitability management or Y with a coefficient of 0.312 in the sense that the

Table 1. Descriptive statistics

	Minimum	Maximum	Mean	Std. Deviation
Y	-12.542	0.897	-1.599	3.851
X1	0.605	1.518	0.965	0.254
X2	0.000	1.341	0.200	0.355
X3	0.007	0.756	0.143	0.146
X4	3.532	6.089	4.445	0.656
X5	0.403	41.258	2.648	7.599
X6	-0.186	0.519	0.000	0.172

Note Y: profitability management, X1: operating efficiency, X2: subsidy, X3: cash flow operating, X4: firm size, X5: leverage, X6: earning management

Table 2. Correlations

	Y	X1	X2	X3	X4	X5	X6
Y	1						
X1	-.817**	1					
X2	-.894**	.797**	1				
X3	.312	-.409*	-.296	1			
X4	-.848**	.839**	.720**	-.358	1		
X5	.052	-.062	-.043	-.078	-.027	1	
X6	-.495**	.426*	.462*	.420*	.360	-.075	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

relationship between these two variables is not strong or changes in variable Y can be explained by changes in variable X3 only around 31, 2% the remaining 68.8% is explained by other variables. The variable control firm size or X4 and earnings management or X6 have a negative and significant correlation with the dependent variable of profitability management or Y, while the leverage variable has a positive and insignificant correlation with profitability management or Y.

4.1.3 The Result of Hypothesis 1

Hypothesis H1, namely the operating efficiency variable or X1 has a negative and significant effect on profitability management or Y, it is not proven as in Table 3 in model-1 with the operating efficiency variable regression coefficient or X1 of 1.789 and sig. 0.480. But through table-3 in model-3 which specifically uses independent variables, it turns out that the operating efficiency variable or X1 has a significant effect on profitability management with a regression coefficient of -4.402 and sig 0.059 ** or supports the hypothesis proposed in this study. This shows that each increase in operating efficiency which is indicated by a decrease in costs to income will increase the profitability management indicator.

4.1.4 The Result of Hypothesis 2

The hypothesis H2 is that the subsidy variable or X2 has a negative and significant effect on profitability management or Y, as evidenced by Table 3 in model-1 with the subsidy variable regression coefficient or X2 of -5.985 and sig. 0,000 ***. This is consistent with table-3 in model-3 which specifically uses only independent variables with the results of the regression coefficient of the subsidy variable or X2 of -7.205 and sig. 0,000 ***. This means that each increase in the number of subsidies will reduce the profitability management indicator. The negative effect of the subsidy variable or X2 indicates that the policy of maintaining subsidies for state-owned enterprises will harm company profitability and it will be increasingly difficult to become an independent company. Otherwise,

4.1.5 The Result of Hypothesis 3

Hypothesis H3, namely the cash flow operating variable or X3 has a positive and significant

effect on profitability management or Y, it is not proven as in Table 3 in model-1 with the regression coefficient of the cash flow operating variable or X3 of 3.026 and sig. 0.320. This is consistent with table-3 in model-3 which specifically uses only independent variables with the results of the regression coefficient of the operating cash flow variable or X3 of -0.059 and sig. 0.981. This means that changes in operating cash flow or X3 do not have a significant effect on profitability management or Y, especially because changes in operating cash flow are only used to adequately finance operations and pay debts that are due,

4.1.6 The Result of Hypothesis 4

Hypothesis H4, namely operating cash flow or X3 strengthens the effect of operating efficiency or X1 and subsidy or X2 on profitability management or Y of state-owned enterprises, it is not proven as shown in table-3 in model-2 with variable regression coefficient X1.X3 of 28.765 and sig. 0.129 and the regression coefficient of the X2.X3 variable are 26.433 and sig. 0.620. This means that the operating flow variable cash does not strengthen the influence of the independent variables X1 and X2 on the dependent variable Y, and the cash flow operating variable or X3 is not a moderator variable, especially because the effect of the operating efficiency variable or X2 on the independent variable Y does not depend on changes in cash flow. operating or X3, and the effect of subsidies or X2 on the dependent variable Y is not influenced by changes in operating cash flow.

4.2 Sensitivity Analysis

The sensitivity analysis is intended to test the consistency of the regression calculations, and compare it with the empirical facts of state-owned enterprises. The independent variable Ys profitability management is measured using the Altman approach in 1983 and the results are as model-3 and model-4. The calculation results by comparing model-1 and model-3 are consistent, especially the independent variables X1, X2, X3, the moderator variable X4, and the control variables X5, X6. What is inconsistent only occurs in the control variable X7, namely in model-1 the effect is not significant 0.114, but in model-2 it is significant 0.052. However, the difference in the level of significance is relatively small with a difference of about 0.06, so it can be stated that the regression calculation results are still within consistent limits.

Table 3. The Influence of Operting Efficiency and Subsidy on Profitability Management

Model 1 : $Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \beta_5 X5_{it} + \beta_6 X6_{it} + e_{it}$
Model 2 : $Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \beta_5 X5_{it} + \beta_6 X6_{it} + \beta_7 (X1.X3)_{it} + \beta_8 (X2.X3)_{it} + e_{it}$
Model 3 : $Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + e_{it}$

	Predict.	Model-1		Model-2		Model-3	
		Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
(Constant)		9.001	0.006 ***	13.405	.007 ***	4.102	0.061 *
X1	+	1.789	0.480	-2.385	.566	-4.402	0.059 **
X2	-	-5.985	0.000 ***	-6.522	.114	-7.205	0.000 ***
X3	+	3.026	0.320	-23.525	.195	-0.059	0.981
X4	-	-2.607	0.003 ***	-2.688	.001 ***		
X5	+	0.009	0.795	-0.002	.965		
X6	-	-3.980	0.139	-4.326	.104 *		
X1.X3	+			28.765	.129		
X2.X3	+			26.433	.620		
Adj-R2		.868		0.884		.808	
F-Statistic		30.569		26.736		38.826	
Prob F-Statistic		.000		.000		.000	
Durbin-Watson		1.819		2.039		1.346	
Total Obs		28		28		28	

*** Significant of 1 percent, ** Significant of 5 percent, * Significant of 10 percent*

Y_{it}: profitability management, $X1_{it}$: operating efficiency, $X2_{it}$: subsidy, $X3_{it}$: cash flow operating, $X4_{it}$: firm size, $X5_{it}$: leverage, $X6_{it}$: earning management, β0: constant, β1… β7: coefficients, eit: error

4.3 Discussion

4.3.1 Operating efficiency

The independent variable operating efficiency or X1 has a negative and significant effect on profitability management or Y, which means that increasing efficiency through reducing total costs or increasing revenue will cause the cost to income ratio to decrease and lead to increased profitability management of state-owned enterprises. This is relevant to the empirical conditions faced by the company's operations, so that management needs to set the company's strategy to reduce operating costs per product unit, and increase the average income per unit of production, so that profitability can be increased.

4.3.2 Subsidy

The independent variable of subsidies or X2 has a negative and significant effect on the dependent variable of profitability management or Y, which means that an increase in the number of subsidies will cause profitability management to decrease because company management finds it difficult to make decisions independently. After all, it prioritizes service interests that are programmed by the government and tends to pay less attention. The profitability of the company.

4.3.3 Cash flow operating

The cash flow operating variable or X3 as an independent variable does not have a significant effect on profitability management Y so that changes in this variable do not cause significant changes in the dependent variable Y. This occurs because cash flow has been regulated in such a way and is related to the subsidized assistance provided. According to the company's cash flow conditions. Cash flow has a less significant effect on profitability because its use tends to be for the benefit of liquidity so that the changes do not have an impact on increasing revenue or reducing the company's operating costs.

4.3.4 Moderating variable

The moderating variables X1.X3 and X2.X3 show an insignificant effect, so it is stated that the cash flow operating variable X3 does not strengthen or weaken the relationship between the independent variables X1 and X2 on the dependent variable Y. Based on the results of these calculations it can be concluded that the cash flow operating variable not as a moderating variable but only as an independent variable that has no significant effect on profitability management or Y.

5. CONCLUSIONS

Based on the results of the analysis and discussion of this research, it can be concluded, namely (a) operating efficiency or X1 has a significant effect on profitability management or Y, so it is necessary to pay attention to company management to aggressively reduce operating expenses and seek innovations to increase sales, so that obtain optimal profitability indicators for state-owned enterprises. (b) Funding through subsidies or X2 harms the profitability of the company, especially because the company is bound by performance controlled by the government to prioritize services that tend to harm the company. Conversely, if subsidies are reduced but company management is encouraged to use efficient resources and give authority in determining a fair price, then the company can improve the profitability management indicator. (c) The cash flow operating variable or X3 has no significant effect on profitability management or Y, especially because changes in the X3 variable are only directly related to the settlement of accounts payable and have less effect on costs and revenues of state-owned enterprises. (d) The moderating variables X1.X2 and X2.X3 have an insignificant effect, which means that cash flow operating is not a moderating variable because it is unable to strengthen or weaken the relationship between independent variables X1 and X2 on the dependent variable profitability management or Y in owned enterprises country. Especially since the change in variable X3 is only directly related to the settlement of accounts payable and has less effect on the costs and revenues of state-owned enterprises. (e) The moderating variables X1.X2 and X2.X3 have an insignificant effect, which means that cash flow operating is not a moderating variable because it is unable to strengthen or weaken the relationship between independent variables X1 and X2 on the dependent variable profitability management or Y in owned enterprises country. Especially since the change in variable X3 is only directly related to the settlement of accounts payable and has less effect on the costs and revenues of state-owned enterprises. (f) The moderating variables X1.X2 and X2.X3 have an insignificant effect, which means that cash flow

operating is not a moderating variable because it is unable to strengthen or weaken the relationship between independent variables X1 and X2 on the dependent variable profitability management or Y in owned enterprises country.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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