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Analysis of the effect of public service obligation on return on assets, return on equity, and current ratio in subsidized state-owned enterprises for the period 2020–2024

Abstract

In state-owned enterprises, balancing financial performance with public service mandates remains a critical challenge, particularly when government compensation policies directly affect corporate operations. Public Service Obligation (PSO) is designed to ensure the provision of essential services to society; however, its implications for the financial performance of state-owned enterprises require comprehensive empirical examination. This study aims to analyze the effect of Public Service Obligation (PSO) on the financial performance of subsidized State-Owned Enterprises (Badan Usaha Milik Negara/BUMN) in Indonesia during the 2020–2024 period. The research adopts a quantitative approach using secondary data collected through documentation of published annual reports and financial statements. The population consists of all BUMN receiving PSO, with purposive sampling applied to select seven enterprises that consistently received PSO and disclosed complete financial data. The study focuses on Indonesia as the research setting and examines financial performance through Return on Assets (ROA), Return on Equity (ROE), and the Current Ratio. Data analysis is conducted using descriptive analysis, simple linear regression, and hypothesis testing through t-tests and F-tests. The findings indicate that PSO exerts a significant influence on the financial performance of BUMN. PSO contributes positively to asset-based profitability and short-term liquidity, while exhibiting a negative relationship with equity-based profitability. These results highlight the inherent trade-off between public service responsibilities and financial efficiency within state-owned enterprises. The study implies that policymakers and BUMN management must design PSO compensation mechanisms that not only ensure service sustainability but also preserve financial performance, particularly capital efficiency and liquidity stability.

Keywords: Current Ratio, Financial Performance of BUMN, Government Subsidy, Public Service Obligation, Return on Assets, Return on Equity

Abstrak

Pada badan usaha milik negara (BUMN), menjaga keseimbangan antara kinerja keuangan dan mandat pelayanan publik tetap menjadi tantangan yang krusial, terutama ketika kebijakan kompensasi pemerintah secara langsung memengaruhi operasional perusahaan. Public Service Obligation (PSO) dirancang untuk menjamin penyediaan layanan esensial kepada masyarakat; namun demikian, implikasinya terhadap kinerja keuangan BUMN memerlukan pengujian empiris yang komprehensif. Penelitian ini bertujuan untuk menganalisis pengaruh Public Service Obligation (PSO) terhadap kinerja keuangan BUMN penerima subsidi di Indonesia selama periode 2020–2024. Penelitian ini menggunakan pendekatan kuantitatif dengan data sekunder yang dikumpulkan melalui dokumentasi laporan tahunan dan laporan keuangan yang telah dipublikasikan. Populasi penelitian mencakup seluruh BUMN penerima PSO, dengan teknik purposive sampling yang menghasilkan tujuh perusahaan yang secara konsisten menerima PSO dan menyajikan data keuangan secara lengkap. Penelitian ini berfokus pada konteks Indonesia dan mengukur kinerja keuangan menggunakan indikator Return on Assets (ROA), Return on Equity (ROE), dan Current Ratio. Analisis data

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dilakukan melalui analisis deskriptif, regresi linier sederhana, serta pengujian hipotesis menggunakan uji t dan uji F. Hasil penelitian menunjukkan bahwa PSO berpengaruh signifikan terhadap kinerja keuangan BUMN. PSO memberikan kontribusi positif terhadap profitabilitas berbasis aset dan likuiditas jangka pendek, namun menunjukkan hubungan negatif terhadap profitabilitas berbasis ekuitas. Temuan ini menegaskan adanya trade-off antara tanggung jawab pelayanan publik dan efisiensi keuangan dalam BUMN. Implikasi penelitian ini menunjukkan bahwa pembuat kebijakan dan manajemen BUMN perlu merancang mekanisme kompensasi PSO yang tidak hanya menjamin keberlanjutan layanan publik, tetapi juga menjaga kinerja keuangan perusahaan, khususnya dalam hal efisiensi permodalan dan stabilitas likuiditas. Kata kunci: Current Ratio, Kinerja Keuangan BUMN, Subsidi Pemerintah, Public Service Obligation, Return on Assets, Return on Equity.

Kata Kunci: Rasio Lancar, Kinerja Keuangan BUMN, Subsidi Pemerintah, Kewajiban Pelayanan Publik, Pengembalian Aset, Pengembalian Ekuitas

1. Introduction

In the context of a modern economy, corporate financial performance represents one of the primary indicators reflecting the level of efficiency, effectiveness, and sustainability of a business entity in conducting its operational activities (Rahmasari, 2023). Financial performance not only serves as a foundation for managerial decision-making but also functions as an essential reference for governments, investors, and other stakeholders in assessing a company's financial health and future prospects. One of the most widely used instruments for evaluating financial performance is financial ratio analysis, which involves comparisons between two or more components of financial statements and provides a comprehensive overview of a company's financial condition (Nasihin & Faddila, 2021). Through financial ratio analysis, management can identify internal strengths and weaknesses, thereby enabling more accurate and data-driven strategic decision-making (Nasihin et al., 2025).

Financial ratios are generally classified into several main categories, namely liquidity ratios, profitability ratios, solvency ratios, and efficiency ratios, each of which offers a different perspective on a firm's financial condition and performance (Nasihin et al., 2022). Liquidity ratios, such as the Current Ratio and Quick Ratio, are used to measure a company's ability to meet its short-term obligations, while profitability ratios, such as Return on Assets (ROA) and Return on Equity (ROE), reflect the effectiveness of a company in generating profits from its assets and equity (Nasihin & Purwandari, 2022). Liquidity ratios, such as the Current Ratio and Quick Ratio, are used to measure a company's ability to meet its short-term obligations, while profitability ratios, such as Return on Assets (ROA) and Return on Equity (ROE), reflect the effectiveness of a company in generating profits from its assets and equity (Putri & Munfaqiroh, 2020).

In the Indonesian context, State-Owned Enterprises (Badan Usaha Milik Negara/BUMN) play a strategic role not only as business entities but also as agents of national development tasked with delivering public services. Several BUMN are assigned special mandates by the government through the Public Service Obligation (PSO) scheme to provide essential goods and services to society, including transportation, energy, food supply, and postal services. Previous international studies suggest that state-owned enterprises face complex trade-offs between public service responsibilities and financial performance, particularly in balancing operational sustainability and profitability objectives (Voorn et al., 2020). The implementation of PSO aims to ensure service affordability, price stability, and equitable access for the public. However, in practice,

such public service assignments often generate financial consequences for the enterprises involved. Consequently, PSO potentially influences cost structures, revenue streams, and overall financial performance of BUMN, particularly in terms of profitability and liquidity.

Although studies on corporate financial performance have been widely conducted, several research gaps remain to be addressed. First, most previous studies have predominantly focused on private companies, banking institutions, manufacturing firms, or service industries, while research specifically examining BUMN receiving PSO remains relatively limited, especially over extended periods and across multiple sectors (Restu Krisnawan & Aries Yudanto, 2021). Second, empirical studies explicitly linking the magnitude of PSO to financial performance indicators such as ROA, ROE, and the Current Ratio are still scarce, despite the importance of such relationships in understanding the financial implications of government subsidy policies. Third, analytical approaches employed in prior research tend to be relatively homogeneous and have not sufficiently explored simple and applicable quantitative methods suitable for analyzing state-owned enterprise data. Moreover, limited integration between public policy variables and financial performance analysis represents an additional gap that warrants further investigation to enrich the financial management literature.

This study specifically positions itself in examining the trade-off between public service mandates and financial performance, rather than merely assessing the direct effect of subsidies. In doing so, it aims to contribute to the literature on state-owned enterprises by integrating public policy variables into financial performance analysis. Based on this background, the present study focuses on analyzing the effect of Public Service Obligation (PSO) on the financial performance of subsidized BUMN in Indonesia during the 2020–2024 period. Financial performance in this study is proxied by three key indicators: Return on Assets (ROA) as a measure of asset-based profitability, Return on Equity (ROE) as an indicator of capital return, and the Current Ratio as a measure of short-term liquidity capability. The selection of the 2020–2024 period is motivated by significant economic dynamics, including the impact of the COVID-19 pandemic and subsequent economic recovery, which potentially affected both PSO policies and the financial performance of BUMN.

In line with this focus, this study seeks to empirically examine how PSO influences the ROA of BUMN receiving subsidies, particularly whether the magnitude of PSO correlates with improvements or declines in asset utilization efficiency for profit generation. Furthermore, this study analyzes the effect of PSO on ROE to determine whether government subsidies and public service mandates affect the rate of return on state-owned capital. Additionally, this research investigates the impact of PSO on the Current Ratio to assess whether public service assignments influence the ability of BUMN to meet their short-term obligations. Accordingly, the research questions are framed narratively to capture the relationship between PSO and the three main financial performance indicators—ROA, ROE, and the Current Ratio—among subsidized BUMN during the 2020–2024 period.

Through this analysis, the study is expected to contribute theoretically to the development of public sector financial management and state-owned enterprise literature, as well as practically to policymakers and BUMN management in formulating more effective and sustainable PSO policies. Moreover, the findings are anticipated to serve as a reference for future researchers examining the relationship between subsidy policies, public service mandates, and the financial performance of state-owned enterprises.

2. Literature review

2.1 Theoretical framework

This study is grounded in two main theoretical perspectives, namely agency theory and public value theory. Agency theory explains the relationship between principals (government) and agents (management of state-owned enterprises), where conflicts of interest may arise due to differing objectives. In the context of Public Service Obligation (PSO), government intervention may influence managerial decisions and potentially reduce financial efficiency.

Meanwhile, public value theory emphasizes that state-owned enterprises are not solely profit-oriented entities but are also responsible for delivering social value to society (Bryson et al., 2017). This perspective is further supported by the concept of collaborative public value creation, which highlights the role of multiple stakeholders in generating public benefits beyond financial outcomes (Crosby et al., 2017). Furthermore, the implementation of Public Service Obligation (PSO) reflects this dual objective, where companies are required to balance financial performance with public service responsibilities. This dual role often creates inherent trade-offs between financial efficiency and social responsibility within state-owned enterprises. Therefore, this study adopts these theoretical perspectives to explain the potential trade-off between public service mandates and financial performance, particularly in terms of profitability and liquidity (Mazzucato, 2018).

2.2 Financial performance analysis

Financial performance is an evaluation process aimed at assessing the extent to which a company follows and applies sound financial principles. Performance is defined as a measure of success in carrying out activities in accordance with current capabilities. Therefore, performance can be understood as the relationship between effort, capability, and perception of the tasks performed. In a corporate context, financial performance reflects the success of management in managing resources effectively and efficiently (Kasmir, 2019).

Financial performance refers to the extent to which a company is able to adopt established policies to achieve its objectives, particularly in financial aspects. This can be identified by analyzing the relationship between revenues generated and costs incurred, as reflected in the company's financial statements (Alif Firdaus, 2024).

According to (Astuti et al., 2021), financial performance analysis is a critical process of examining a company's financial performance, which includes reviewing financial data, calculating and measuring financial indicators, interpreting results, and providing solutions to financial problems during a specific period. This analysis aims to obtain a comprehensive overview of the company's financial condition and serves as a foundation for managerial decision-making.

Financial statement analysis is used for various purposes, including as an initial screening tool in selecting investment or merger alternatives, as a forecasting tool for future financial conditions and performance, as a diagnostic process for identifying management and operational problems, and as a tool for evaluating managerial performance (Astuti et al., 2021).

In the context of state-owned enterprises (BUMN) receiving subsidies, financial performance analysis becomes increasingly important because companies are not only required to achieve profitability but also to fulfill public service functions through the Public Service Obligation (PSO) scheme.

2.3 Financial ratios

Financial ratios are essential tools in analyzing corporate financial performance and supporting managerial decision-making. Various studies indicate that the use of financial ratios provides in-depth insights into a company's financial health. (Putri & Munfaqiroh, 2020), in their study, revealed that financial ratio analysis can be effectively used to measure corporate financial performance. Their findings indicate that liquidity, profitability, and solvency ratios have a significant influence on financial performance.

(Dewa & Sunrowiyati, 2016) also emphasized the importance of financial ratio analysis as an evaluation tool for measuring financial performance, particularly in the case of SPBU Gedog. The results of their study demonstrate that financial ratios can assist management in making better operational and strategic decisions. Furthermore, (Ardansyah & Hasan, 2025) examined the effectiveness of financial ratio usage in financial management decision-making at PT Unilever Tbk and found that financial ratios not only function as performance measurement tools but also serve as guidelines for strategic decision-making that impacts corporate growth.

(Rusti'ani & Wiyani, 2017) highlighted that financial ratios can serve as indicators for measuring the financial performance of cement companies, while (Susandra & Gandara, 2017) analyzed financial decision-making using a financial ratio analysis approach at RSUD Ciawi, Bogor Regency. Both studies emphasize that ratio analysis provides a clear picture of a company's financial position and assists management in formulating more appropriate financial policies. Financial statement and ratio analyses form a strong foundation for evaluating corporate performance and improving the quality of managerial decision-making (Apriani et al., 2023).

In this study, financial ratios are focused on three main indicators: Return on Assets (ROA), Return on Equity (ROE), and the Current Ratio, as these ratios represent profitability and liquidity aspects that are relevant for assessing the financial performance of BUMN receiving PSO.

2.4 Liquidity ratios

Liquidity ratios describe a company's ability to meet its short-term obligations. This means that when liabilities fall due, the company is able to settle its obligations in a timely manner. In other words, liquidity ratios indicate a company's capacity to fulfill commitments both to external and internal parties. The higher the proportion of current assets relative to current liabilities, the better the company's ability to meet its short-term obligations (Fitriana, 2024).

If the Current Ratio is 1:1 or 100%, it indicates that current assets are sufficient to cover all current liabilities. Therefore, a company's financial condition is considered healthy when the Current Ratio exceeds one or 100%. This implies that current assets should be significantly greater than current liabilities, providing a sufficient margin of safety in meeting short-term obligations.

According to (Fitriana, 2024), the Current Ratio can be calculated using the following formula:

$$\text{Current Ratio} = \left(\frac{\text{Current Assets}}{\text{Current Liabilities}} \right) \times 100\% \quad (1)$$

2.5 Profitability ratios

According to (Fitriana, 2024), profitability ratios describe a company's ability to generate profit from sales, assets, and equity. Meanwhile, (Juliar & Wahyudi, 2023) stated that profitability ratios reflect a company's potential to generate profit by utilizing all available resources. These ratios are used to assess the company's success in generating profits as well as its long-term business sustainability (*going concern*).

According to (Hutabarat, 2020), several indicators can be used to measure profitability ratios, including Net Profit Margin, Operating Income Ratio, and Return on Investment. However, in this study, profitability analysis is narrowed to two main indicators: Return on Assets (ROA) and Return on Equity (ROE), as both directly reflect the efficiency of asset utilization and the effectiveness of capital management.

ROA indicates a company's ability to generate profit from its total assets, while ROE reflects the rate of return earned by equity holders on their invested capital. These two ratios are highly relevant in assessing the financial performance of BUMN receiving PSO, as they illustrate the extent to which government subsidies and public service mandates impact corporate profitability.

$$\text{ROA} = \left(\frac{\text{Laba Bersih}}{\text{Total Aset}} \right) \times 100\% \quad (2)$$

$$\text{ROE} = \left(\frac{\text{Laba Bersih}}{\text{Ekuitas}} \right) \times 100\% \quad (3)$$

2.6 The effect of public service obligation on return on assets

Return on Assets (ROA) reflects a company's ability to generate net income from the total assets it controls. According to (Fitriana, 2024), profitability ratios measure the firm's capacity to obtain profits from assets and other resources, while (Juliar & Wahyudi, 2023) emphasize that profitability indicates how efficiently management utilizes available assets to generate earnings. In the context of BUMN, ROA is a crucial indicator because it shows whether public assets entrusted to the company are managed efficiently to produce financial returns.

The implementation of *Public Service Obligation* (PSO) may influence ROA through changes in asset utilization and operational efficiency. PSO-related activities often require the use of substantial assets to provide public services at regulated prices, which may reduce profitability if compensation is insufficient. Conversely, government compensation through PSO schemes may help offset operational costs and support asset productivity. Previous studies indicate that financial performance ratios, including asset-based profitability measures, are influenced by policy-related financial mechanisms and managerial decisions (Putri & Munfaqiroh, 2020; Dewa & Sunrowiyati, 2016; Ardansyah & Hasan, 2025). Therefore, PSO is expected to have a measurable impact on ROA of BUMN.

H1: PSO has a significant effect on ROA of BUMN receiving PSO.

2.7 The effect of public service obligation on return on equity

Return on Equity (ROE) measures the company's ability to generate profits from the equity invested by shareholders. According to (Fitriana, 2024), profitability ratios related to equity reflect the effectiveness of management in utilizing capital to generate returns, while (Hutabarat, 2020) explains that ROE represents the level of return earned by owners on their invested capital. In BUMN, ROE is particularly important as it reflects the return generated on state-owned capital.

The presence of PSO may affect ROE by influencing net income and capital structure. PSO activities may suppress profit margins due to regulated tariffs, potentially lowering ROE. However, government compensation and subsidies associated with PSO may help maintain profitability and protect returns on equity. Empirical evidence suggests that financial ratios, including equity-based profitability measures, are closely related to financial policies and government interventions (Putri & Munfaqiroh, 2020; Ardansyah & Hasan, 2025). Accordingly, PSO is expected to influence ROE of BUMN receiving public service mandates.

H2: PSO has a significant effect on ROE of BUMN receiving PSO

2.8 The effect of public service obligation on current ratio

Current Ratio is a liquidity indicator that reflects a company's ability to meet its short-term obligations using current assets. According to (Fitriana, 2024), a higher *Current Ratio* indicates stronger liquidity and a better capacity to fulfill short-term liabilities. For BUMN receiving PSO, maintaining adequate liquidity is essential to ensure uninterrupted public service delivery.

PSO compensation from the government may affect liquidity by increasing cash inflows and supporting working capital. Conversely, delays in PSO compensation realization or higher operational expenditures related to public service mandates may place pressure on short-term liquidity. Prior studies highlight that liquidity ratios are significantly influenced by financial policies and managerial decisions (Putri & Munfaqiroh, 2020; Rusti'ani & Wiyani, 2017; Susandra & Gandara, 2017). Therefore, PSO is expected to have a significant impact on the *Current Ratio* of BUMN.

H3: PSO has a significant effect on *Current Ratio* of BUMN receiving PSO

2.9 The simultaneous effect of public service obligation on financial performance

Financial performance represents the overall effectiveness of a company in managing its financial resources. According to (Kasmir, 2019), financial performance reflects how well a company applies sound financial principles, while (Astuti et al., 2021) emphasize that financial performance analysis provides a comprehensive evaluation of a firm's financial condition. In BUMN, financial performance should be assessed comprehensively by considering both profitability and liquidity dimensions.

Since PSO affects revenue structures, cost allocation, and cash flows simultaneously, it may influence ROA, ROE, and *Current Ratio* at the same time. Empirical studies confirm that financial ratios collectively provide a strong basis for evaluating company performance and supporting managerial decision-making (Apriani et al., 2023; Syaharman, 2021). Therefore, examining the simultaneous effect of PSO on ROA, ROE, and *Current Ratio* is essential to obtain a holistic understanding of its impact on BUMN financial performance.

H4: PSO has a significant simultaneous effect on the financial performance of BUMN receiving PSO, as measured by ROA, ROE, and *Current Ratio*.

3. Method

3.1 Research design

This study employs a quantitative approach aimed at analyzing the effect of *Public Service Obligation* (PSO) on the financial performance of state-owned enterprises (*Badan Usaha Milik Negara* / BUMN) receiving government subsidies in Indonesia. The data collection method used in this study is documentation, involving the collection of secondary data derived from companies' financial statements and annual reports. The data were obtained from officially published annual reports and financial statements of each BUMN, as well as other relevant supporting sources.

The data analyzed cover the period 2020–2024, as this timeframe represents significant dynamics in PSO policy implementation and economic conditions that potentially affected the financial performance of BUMN. The financial performance indicators used as dependent variables in this study are *Return on Assets* (ROA), *Return on Equity* (ROE), and *Current Ratio*, while *Public Service Obligation* (PSO) serves as the independent variable.

In addition to logarithmic transformation, PSO was normalized by total assets to better capture the relative intensity of government compensation across firms of different sizes. This normalization improves cross-firm comparability and strengthens measurement validity in evaluating the financial implications of PSO among subsidized SOEs.

3.2 Population and sample

The population of this study consists of all state-owned enterprises (BUMN) that receive government subsidies or compensation through the *Public Service Obligation* (PSO) scheme. The sample was determined using purposive sampling, namely selecting samples based on specific criteria relevant to the research objectives.

The sample selection criteria are as follows:

1. BUMN that consistently received PSO during the 2020–2024 period.
2. BUMN that published complete financial reports and annual reports during the research period.
3. BUMN that had the financial data needed to calculate ROA, ROE, and *Current Ratio*

Based on these criteria, seven (7) BUMN were selected as the research sample, namely Perum BULOG, PT Kereta Api Indonesia (Persero), Perum LKBN ANTARA,

PT Pelayaran Nasional Indonesia (Persero), PT Pertamina (Persero), PT Perusahaan Listrik Negara (Persero), and PT Pos Indonesia (Persero). With an observation period of five years, the study utilizes time-series data combined with cross-entity observations for analysis.

3.3 Data collection technique

The data collection technique employed in this study is the documentation method. Data were collected from written sources in the form of financial statements and annual reports of the sampled BUMN, as well as other official documents related to PSO compensation and corporate financial performance. The documentation method was chosen because it provides objective, systematic, and academically accountable data (Hardani, 2020).

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3.4 Data analysis technique

The data analysis in this study was conducted in several stages. This study employs panel data regression analysis to examine the effect of Public Service Obligation (PSO) on the financial performance of state-owned enterprises. Panel data analysis is used because the dataset consists of both cross-sectional (seven BUMN) and time-series (2020–2024) dimensions, allowing for a more comprehensive and accurate estimation.

The first stage involved descriptive analysis to provide a general overview of the development of PSO, ROA, ROE, and the Current Ratio among BUMN receiving PSO during the period 2020–2024. This analysis aimed to identify general patterns and fluctuations in financial performance.

The second stage consisted of panel data regression analysis to examine the effect of PSO on financial performance indicators, namely Return on Assets (ROA), Return on Equity (ROE), and Current Ratio (CR). The regression models employed in this study are specified as follows:

$$ROA = \alpha + \beta PSO + \varepsilon \quad (4)$$

$$ROE = \alpha + \beta PSO + \varepsilon \quad (5)$$

$$Current\ Ratio = \alpha + \beta PSO + \varepsilon \quad (6)$$

Regression analysis was conducted to determine the direction and significance of the effect of PSO on the financial performance of BUMN.

In addition to PSO as the independent variable, this study includes control variables consisting of firm size (SIZE) and leverage (LEV) to reduce potential bias in the regression model. Firm size is measured using the natural logarithm of total assets, while leverage is measured using the debt-to-equity ratio. These variables are included because they are commonly associated with financial performance.

The third stage involved hypothesis testing using the *t-test* and *F-test*. The *t-test* was applied to assess the partial effect of PSO on each dependent variable (ROA, ROE, and Current Ratio), while the *F-test* was used to evaluate the overall significance of the

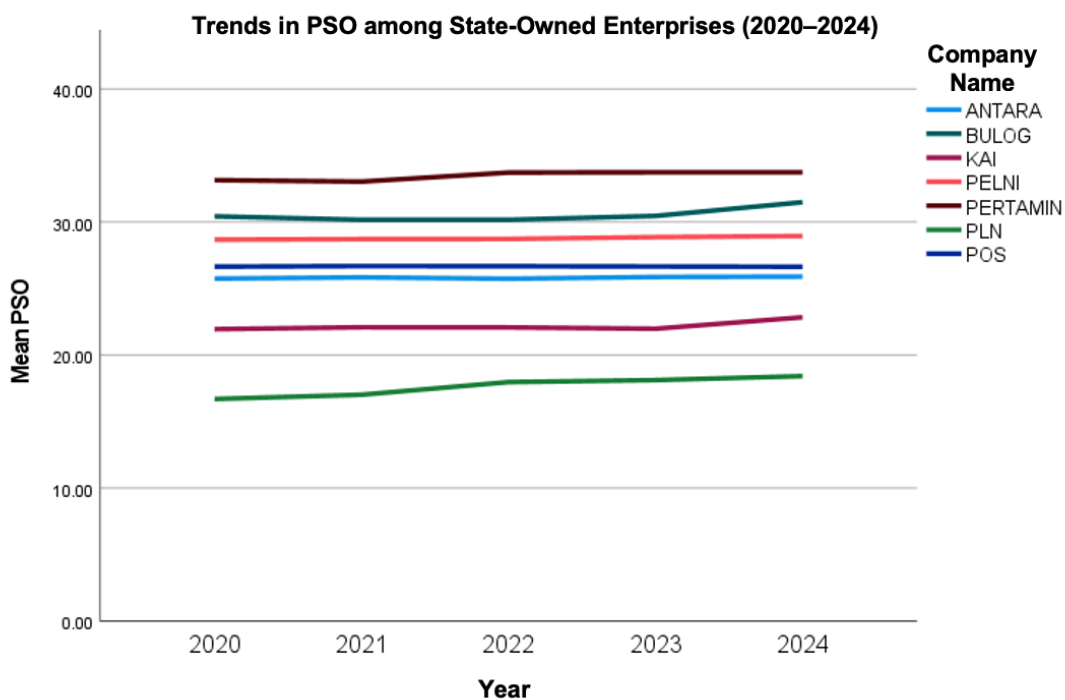
regression model. A significance level of 5 percent ($\alpha = 0.05$) was used as the criterion for hypothesis acceptance or rejection.

By applying descriptive analysis, regression analysis, and hypothesis testing (*t-test* and *F-test*), this study examines not only the statistical influence of PSO on the financial performance of BUMN but also provides a comprehensive understanding of how government compensation policies affect profitability and liquidity indicators of state-owned enterprises. This approach is expected to offer a clearer and more robust depiction of the implications of PSO policies on the financial performance of BUMN in Indonesia.

4. Results

4.1 Descriptive result

This section presents the development of PSO values among seven state-owned enterprises (*Badan Usaha Milik Negara / BUMN*) during the period 2020–2024. The PSO data used in this analysis represent government compensation values that have been transformed into natural logarithmic (LN) form to reduce scale differences among companies and to facilitate descriptive comparative analysis.



Enterprises (*Badan Usaha Milik Negara / BUMN*) during the period 2020–2024. The PSO data used in this analysis represent government compensation values that have been transformed into natural logarithmic (LN) form to reduce scale differences among companies and to facilitate descriptive comparative analysis.

Figure 1. Development of PSO Values among Seven BUMN during 2020–2024

Overall, the figure illustrates that all BUMN exhibit relatively stable PSO development patterns with a tendency to increase in certain periods, although the magnitude and direction of change vary across companies. Pertamina is recorded as the BUMN with the highest PSO value throughout the observation period. Pertamina’s PSO

shows an increasing trend from 2020 to 2022 and then remains relatively stable until 2024. This reflects Pertamina’s substantial role in carrying out public service assignments, particularly in the energy sector.

BULOG ranks second with relatively high PSO values. The figure indicates that BULOG’s PSO declined in 2021 and 2022 before increasing significantly in 2023 and reaching its highest level in 2024. This pattern suggests fluctuations in the amount of government compensation received by BULOG during the study period.

PELNI exhibits PSO values at a moderate level with a gradual upward trend from 2020 to 2024. This consistent increase indicates the stability of public service assignments in the maritime transportation sector. Meanwhile, KAI records relatively lower PSO values compared to BULOG and PELNI, with a generally stable pattern and a slight increase in 2024.

LKBN ANTARA demonstrates relatively stable PSO values throughout the study period with minimal fluctuations, indicating consistency in the level of government compensation received annually. POS Indonesia also shows a relatively stable pattern, although a slight downward trend is observed in the most recent years.

PLN represents the BUMN with the lowest PSO values in the figure; however, it exhibits a gradual increasing trend during the 2020–2024 period. Although PLN’s PSO values are nominally smaller than those of other BUMN, this upward trend indicates an increase in public service assignments or government compensation over the study period.

Overall, the descriptive results indicate that PSO among subsidized BUMN during 2020–2024 exhibits diverse characteristics in terms of magnitude and development patterns. These differences reflect variations in business sectors, levels of public service assignments, and government compensation policies applied to each BUMN.

4.2 T-Test result

The *t-test* is used to examine the partial effect of PSO on each financial performance variable, namely *Return on Assets* (ROA), *Return on Equity* (ROE), and *Current Ratio*. The decision criterion for the *t-test* is that if the significance value (Sig.) is less than 0.05, the independent variable is considered to have a significant effect on the dependent variable.

Table 1. T-Test

Variable	t	Sig.
ROA	0,387	0,000
ROE	-0,741	0,000
Current Ratio	1,935	0,000

Source: Processed Data (2025)

Based on Table 1, the *t-test* results show that ROA has a *t*-value of 0.387 with a significance value of 0.000. Since the significance value is less than 0.05, PSO has a significant effect on ROA. The positive *t*-value indicates that an increase in PSO tends to be followed by an increase in ROA.

Furthermore, the *t-test* results for ROE show a *t*-value of -0.741 with a significance value of 0.000. This indicates that PSO has a significant effect on ROE. The negative *t*-value suggests an inverse relationship, where an increase in PSO tends to be associated with a decrease in ROE.

Meanwhile, the *Current Ratio* variable has a *t*-value of 1.935 with a significance value of 0.000. This result indicates that PSO has a significant effect on the *Current Ratio*.

The positive *t*-value suggests a direct relationship, meaning that an increase in PSO tends to improve the liquidity capability of BUMN in meeting short-term obligations.

Overall, the *t*-test results indicate that *Public Service Obligation* (PSO) has a significant partial effect on all examined financial performance indicators—ROA, ROE, and *Current Ratio*—with differing directions of influence for each variable.

4.3 F-Test result

The *F*-test is used to examine the simultaneous effect of *Public Service Obligation* (PSO) on financial performance variables, namely *Return on Assets* (ROA), *Return on Equity* (ROE), and *Current Ratio*. The decision criterion for the *F*-test is that if the significance value (Sig.) is less than 0.05, the regression model is considered statistically significant and the independent variable jointly affects the dependent variable.

Table 2. F-Test

Variable	F	Sig.
ROA	0,150	0,000
ROE	0,549	0,000
Current Ratio	3,744	0,000

Source: Processed Data (2025)

Based on Table 2, the *F*-test result for the model explaining ROA shows an *F*-value of 0.150 with a significance value of 0.000. Since the significance value is below 0.05, the regression model of PSO on ROA is statistically significant, indicating that PSO simultaneously affects ROA.

Similarly, the *F*-test result for the ROE model shows an *F*-value of 0.549 with a significance value of 0.000. This indicates that the regression model is valid and that PSO simultaneously affects ROE.

Meanwhile, the *F*-test result for the *Current Ratio* model shows an *F*-value of 3.744 with a significance value of 0.000. The relatively higher *F*-value compared to the other models indicates a stronger simultaneous effect of PSO on the *Current Ratio*. The significance value below 0.05 confirms that the regression model of PSO on the *Current Ratio* is statistically significant.

Overall, the *F*-test results indicate that *Public Service Obligation* (PSO) simultaneously has a significant effect on ROA, ROE, and the *Current Ratio*. This suggests that PSO is a relevant factor in explaining variations in the financial performance of subsidized BUMN during the study period.

4.4 Regression test

Based on the regression results presented in Table 3, the constant and regression coefficients are obtained for each relationship between *Public Service Obligation* (PSO) and the financial performance indicators of BUMN, namely *Return on Assets* (ROA), *Return on Equity* (ROE), and *Current Ratio*. The constant (α) represents the value of the dependent variable when PSO equals zero, while the regression coefficient (β) indicates the direction and magnitude of the effect of PSO on each financial performance indicator.

Table 3. Regression Test

Variable	Constant (α)	Unstandardized Coefficients β
PSO-ROA	1,706	0,073

PSO-ROE	32,770	-0,750
PSO-Current Ratio	-63,784	10,610

Source: Processed Data (2025)

In the regression model of PSO on ROA, the constant value is 1.706 and the regression coefficient is 0.073. The positive coefficient indicates that an increase in PSO tends to be followed by an increase in ROA. This suggests that additional PSO compensation may enhance the effectiveness of asset utilization in generating profits, although the magnitude of the effect is relatively small.

In the regression model of PSO on ROE, the constant value is 32.770 and the regression coefficient is -0.750 . The negative coefficient indicates an inverse relationship between PSO and ROE, where an increase in PSO tends to be associated with a decrease in ROE. This finding suggests that although PSO provides compensation to BUMN, the accompanying public service assignments may suppress returns on equity, thereby affecting the efficiency of capital management.

Meanwhile, the regression results for PSO on the *Current Ratio* show a constant value of -63.784 and a regression coefficient of 10.610. The positive and relatively large coefficient indicates that an increase in PSO tends to be followed by an increase in the *Current Ratio*. This suggests that PSO potentially strengthens the liquidity position of BUMN, particularly by improving their ability to meet short-term obligations through government compensation-supported cash flows.

Overall, the regression results in Table 3 indicate that PSO has different directional effects on each financial performance indicator. PSO tends to have a positive effect on ROA and the *Current Ratio*, while exhibiting a negative effect on ROE. These differing directions of influence reflect a trade-off between public service functions and the financial performance of BUMN, particularly in terms of equity-based profitability.

5. Discussion

5.1 *The effect of public service obligation on return on assets of BUMN*

The regression test results show that Public Service Obligation (PSO) has a positive effect on Return on Assets (ROA), which means that an increase in PSO tends to be followed by an increase in BUMN ability to generate profits from their assets. This finding indicates that government compensation through PSO contributes to the effective utilization of assets, particularly in the context of BUMN that carry out a public service mandate while maintaining their commercial function. Economically, the PSO provided can help companies cover operational costs related to public service tasks, thereby indirectly strengthening the productive asset base, which is then reflected in a higher ROA.

This finding is in line with (Hermansjah et al., 2021), which shows a positive relationship between government policy support or state capital involvement and the financial performance of state-owned companies. For example, research on the effect of state ownership on company performance shows that factors related to government intervention tend to improve financial performance, such as ROA and ROE, in BUMN in the long term, due to capital support or certain structural policies that reduce cost pressures.

5.2 The effect of public service obligation on return on equity of BUMN

The results of the study show that Public Service Obligation (PSO) has a significant but negative effect on Return on Equity (ROE), which means that an increase in PSO tends to be followed by a decrease in the rate of return on capital obtained by shareholders, in this case the state as the owner of BUMN. This may occur because although PSO provides financial compensation, the accompanying public service assignments often require companies to provide services at affordable or unprofitable prices, thereby reducing the profit margin received by capital holders. As a result, even though total revenue may increase or remain stable, net income, which is the basis for calculating ROE, actually decreases due to additional expenses that are not fully covered by PSO compensation.

From the perspective of capital structure theory, the negative relationship between PSO and ROE may arise because state-owned enterprises prioritize public service obligations over shareholder value maximization (Brigham & Houston, 2019). Although PSO compensation supports operational continuity and asset utilization, regulated pricing mechanisms and additional service burdens may reduce net profitability attributable to equity holders. Consequently, higher PSO intensity may suppress returns on equity despite improvements in operational stability.

Furthermore, excessive dependence on government compensation may create long-term sustainability risks if reimbursement mechanisms become delayed or fiscally constrained. Similar findings have been reported in international studies on state-owned enterprises, where government subsidies tend to strengthen liquidity and operational resilience while simultaneously weakening equity-based profitability due to social and political obligations imposed on firms (OECD, 2023).

This finding is in line with (Marimuthu, 2020), which shows that government assistance or support does not always have a positive impact on capital profitability, especially in the case of support related to public obligations. Government support in the form of subsidies and guarantees often has a negative effect on a company's financial performance due to dependency, administrative costs, and operational disruptions that occur after the assistance is provided.

Furthermore, research by (Isma et al., 2025) shows that although government capital injections can affect financial performance measures such as ROE, the effect can be negative if the capital or subsidies are not used productively or if they encourage companies to bear greater operational burdens without improving management efficiency.

5.3 The effect of public service obligation on current ratio of BUMN

The results of the study indicate that the Public Service Obligation (PSO) has a positive and significant effect on the Current Ratio of subsidized BUMN, which means that the greater the PSO compensation received, the higher the company's ability to meet its short-term obligations. Financially, a higher Current Ratio reflects greater liquidity—meaning that the company's current assets are sufficient to cover its short-term liabilities—an important condition for BUMN that must perform public service functions while maintaining operational stability. The provision of PSO compensation helps strengthen

the company's cash flow and working capital, so that the company has a better capacity to handle current liabilities without being shaken by operational burdens that are not fully covered by commercial income.

These findings are in line with research findings that emphasize the importance of liquidity in maintaining the financial health of a company. Recent studies show that liquidity ratios such as the current ratio are important indicators in evaluating a company's ability to meet short-term obligations, where a high current ratio is often associated with a better ability to handle short-term financial pressures and reduce the possibility of liquidity difficulties (Septia, 2025). In addition, good cash flow management, which is often supported by government subsidies or compensation, can help companies maintain balanced liquidity so that operations continue to run smoothly even when the burden of public services increases. The difference in context with several other studies that found a negative or insignificant relationship between liquidity and various measures of company performance shows that the effect of liquidity is highly dependent on the industry context and the structure of the policy support applied, so that the results of this study reinforce the picture that in the context of BUMN receiving PSO, government compensation actually contributes positively to short-term liquidity.

5.4 The simultaneous effect of public service obligation on financial performance of BUMN

The results of the simultaneous test (F-test) show that Public Service Obligation (PSO) has a significant overall effect on the financial performance of state-owned enterprises as measured by three main indicators: Return on Assets (ROA), Return on Equity (ROE), and Current Ratio. Comprehensively, these findings indicate that PSO not only affects one dimension of financial performance separately, but also has a simultaneous integrated effect on asset-based profitability, return on capital efficiency, and corporate liquidity health. As a public policy instrument, PSO plays a role in supporting company cash flow while influencing cost and revenue structures, thereby collectively impacting the company's overall financial performance.

These findings are consistent with the literature emphasizing that government subsidy and compensation policies can have a broad impact on corporate financial structures, including in the context of state-owned enterprises. The influence of public policy support on company financial performance finds that government support can have a significant impact on various aspects of financial performance, especially when measured simultaneously through several indicators such as ROA, ROE, and liquidity ratios, confirming that fiscal and compensation policies such as PSO do play an important role in influencing companies' operational decisions and financial results holistically (Sayidah et al., 2020).

However, this study's focus on BUMN that receive PSO directly clarifies that the impact is multidimensional and contextual, where government compensation not only contributes to profitability but also substantially affects liquidity and return on capital, thus providing a more complete picture of BUMN financial performance within the framework of complex public policy.

6. Conclusion

This study concludes that Public Service Obligation (PSO) exerts a significant and multifaceted influence on the financial performance of BUMN receiving government subsidies during the 2020–2024 period. PSO contributes positively to asset-based profitability, as reflected in improved Return on Assets (ROA), indicating that government compensation supports more effective utilization of corporate assets despite the presence of public service mandates. In addition, PSO enhances short-term liquidity, as evidenced by its positive effect on the Current Ratio, underscoring its role in stabilizing cash flows and supporting operational continuity. Conversely, the negative impact of PSO on Return on Equity (ROE) suggests that public service assignments may impose financial constraints on capital efficiency, thereby reducing returns to the state as the principal shareholder. This finding illustrates the structural tension between social objectives and financial performance within state-owned enterprises. Taken together, the results demonstrate that PSO influences BUMN financial performance in a comprehensive manner, affecting profitability, liquidity, and capital returns simultaneously. Therefore, achieving a sustainable balance between public service delivery and financial performance remains a central challenge in the governance and management of BUMN in Indonesia.

7. Theoretical and practical implication

This study provides meaningful theoretical and practical insights into the role of Public Service Obligation (PSO) in shaping the financial performance of state-owned enterprises (BUMN) in Indonesia. From a theoretical perspective, the findings contribute to the literature on public sector financial management by demonstrating that PSO functions as a multidimensional policy instrument whose effects on corporate performance are not uniform across financial indicators. The positive relationship between PSO and Return on Assets (ROA) and Current Ratio indicates that government compensation supports asset utilization efficiency and short-term liquidity, particularly in enterprises carrying out extensive public service mandates. However, the negative association between PSO and Return on Equity (ROE) highlights an inherent trade-off between public service objectives and shareholder value maximization, reinforcing the notion that BUMN performance cannot be fully explained using conventional private-sector financial theories.

These findings extend the theoretical understanding of government intervention within a mixed economy framework, where state-owned enterprises simultaneously pursue social objectives and financial sustainability. The results suggest that PSO alters cost structures, revenue mechanisms, and capital efficiency, leading to differentiated impacts on profitability and liquidity dimensions. Consequently, this study strengthens the argument that financial performance evaluation of BUMN should incorporate policy-related variables such as PSO to accurately capture the economic consequences of public service mandates.

From a practical standpoint, the results imply that PSO plays a crucial role in maintaining the operational stability of BUMN, particularly through its positive contribution to liquidity and asset productivity. Government compensation mechanisms help alleviate cash flow pressures arising from non-commercial service obligations, enabling firms to sustain day-to-day operations without compromising financial solvency.

Nevertheless, the observed decline in ROE associated with increased PSO suggests that existing compensation schemes may not fully offset the opportunity costs borne by equity holders, namely the state. This highlights the need for policymakers and BUMN management to reassess the design and implementation of PSO schemes to ensure that public service delivery does not disproportionately erode capital returns.

8. Limitations and suggestions for further research

This study has several limitations that should be considered when interpreting the findings. First, the research only includes seven State-Owned Enterprises (Badan Usaha Milik Negara/BUMN) that consistently received Public Service Obligation (PSO) during the 2020–2024 period. Although these enterprises represent strategic sectors such as energy, transportation, logistics, and public services, the relatively limited number of samples restricts the generalizability of the results to all BUMN in Indonesia. Second, the observation period is confined to five years, which, while capturing important economic dynamics such as the COVID-19 pandemic and the subsequent recovery phase, may not fully reflect the long-term structural impact of PSO on financial performance. A longer time horizon could provide deeper insights into sustainability and long-run financial consequences. Third, the study employs simple linear regression analysis, which primarily identifies direct relationships between PSO and financial performance indicators. This approach does not accommodate more complex interactions, such as moderating or mediating variables including firm size, leverage, operational efficiency, or sectoral characteristics. Fourth, the analysis focuses solely on three financial indicators Return on Assets (ROA), Return on Equity (ROE), and Current Ratio thus limiting the evaluation to profitability and liquidity dimensions, without incorporating solvency, efficiency, or market-based performance measures. Lastly, the measurement of PSO is based on the nominal value of government compensation (in logarithmic form), which may not fully capture qualitative aspects such as service intensity, tariff regulation complexity, or potential delays in compensation disbursement.

Based on these limitations, several suggestions for further research can be proposed. Future studies are encouraged to expand the sample by including a broader range of BUMN across different sectors or by conducting comparative analyses between BUMN that receive PSO and those that do not. Extending the research period to include data prior to 2020 would also allow for a more comprehensive longitudinal analysis and better identification of long-term trends. Moreover, future research may apply more advanced econometric methods, such as panel data regression models or structural equation modeling, to capture firm-specific heterogeneity and strengthen causal inference. Researchers are also advised to incorporate additional financial and non-financial variables, including leverage ratios, efficiency measures, governance indicators, and public value performance, to provide a more holistic assessment of financial sustainability. Finally, further studies could explore the optimal design of PSO compensation mechanisms, particularly in balancing public service sustainability with financial efficiency, in order to generate more practical policy recommendations for improving the governance and performance of BUMN in Indonesia.

9. References

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