

THE INFLUENCE OF EFFECTIVENESS AND EFFICIENCY RATIO ON REGIONAL ECONOMIC GROWTH IN NORTH SUMATRA PROVINCE

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ABSTRACT

This research aims to test and prove the influence of effectiveness ratios and efficiency ratios on regional economic growth in North Sumatra Province. This research is research with a quantitative approach. The type of data used in this research is secondary data in the form of district or city budget realization reports in North Sumatra Province. The data analysis technique used is structural equation modeling (SEM) with partial least squares (PLS) analysis. The research results prove that the effectiveness ratio has an effect on regional economic growth, while the efficiency ratio has no effect on economic growth.

Keywords: Effectiveness Ratio, Efficiency Ratio, Regional Economic Growth.

INTRODUCTION

The economic growth of a region can be caused by various factors. One of them is financial management in government that runs well. Good governance will influence the progress of a region. Since the enactment of 23 of 2014 concerning Regional Government and Law Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Government, regions have become the center of financial management. Regions are required to manage finances economically, efficiently and effectively. This was confirmed by Hartono *et. al.*, (2020) which states that regional financial management is carried out economically, efficiently and effectively or fulfills the principles of value of money as well as participation, transparency, accountability and justice and can encourage economic growth. Analysis of financial ratios to the APBD determined and implemented is one of the methods used to assess how well local governments manage their regional finances (Halim, 2007). Regional government financial performance which influences economic growth can be measured using effectiveness ratios and efficiency ratios. The effectiveness ratio influences regional economic growth, because this ratio describes the regional government's ability to realize planned regional original income compared to targets set based on the region's real potential. The local government's ability to carry out its duties and functions is categorized as effective if the ratio achieved is at least one or 100%. The higher the effectiveness ratio, the better the performance of regional capabilities (Putri *et al.*, 2020). Research by Suryaningsih *et al.*, (2022), Adipura *et al.*, (2022), and Azhari, *et al.*, (2020) shows that effectiveness has a positive and significant effect on economic growth.

Different results obtained from research by Nahak, *et al.*, (2022) prove that the effectiveness ratio has a negative and significant effect on economic growth, while research by Fernanda, *et al.*, (2023) states that effectiveness has no effect on regional economic growth.

The efficiency ratio also influences regional economic growth. Regional financial efficiency is a benchmark for regional financial performance that shows how regions are able to manage their finances well. The Efficiency Ratio is a comparison between the amount of costs incurred to obtain income and the actual income received (Maulina & Rhea, 2019). The smaller the efficiency ratio means the better the local government's performance. Research on the influence of efficiency on economic growth has been carried out by previous researchers, including Ayu, *et al.*, (2020) which results that financial efficiency has a direct effect on economic growth. This is also supported by research by Haq, *et al.*, (2023) and Saputra, *et al.*, (2023) which shows the positive and significant influence of efficiency on economic growth. In contrast to research conducted by Ernawati (2024) and Adipura *et al.*, (2022) who stated that efficiency does not have a significant effect on economic growth and Akbar, *et al.*, (2021) and Nahak, *et al.*, (2022) prove that efficiency has a negative and insignificant effect on economic growth. Data published by the Central Regional Statistics Agency of North Sumatra Province shows that the economic growth rate of North Sumatra Province for the 2018-2022 period every year it does not reach the targets set in the 2018-2022 Regional Medium Term Development Plan (RPJMD) document. Although in 2018 and 2019 the realization almost reached the target, namely in 2018 it reached 5.18 percent of the target of 5.20 percent and in 2019 it reached 5.22 percent of what has been set at 5.30 percent, but the achievement in 2020 is negative, namely -1.07 percent of the target of 5.40 percent or economic growth experienced a contraction (minus). Likewise in the following year, in 2021 the target set is 5.50 percent but the realization only reached 2.61 percent. In 2022, even though there will be an increase in economic growth, the realization will be 4.73 percent unable to meet the set target, namely 5.60 percent. This shows that North Sumatra Province during 2018-2022 was unable to meet the economic growth targets that had been set. Based on the problems found regarding fluctuations in the value and percentage of regional economic growth every year in North Sumatra Province, this motivated the author to conduct research on the influence of the effectiveness ratio and efficiency ratio on regional economic growth in North Sumatra Province in 2018-2022.

Theoretical basis

Agency Theory

Jensen and Meckling (1976) state that agency theory *is* a contract between one or more people called principals who appoint another party called an agent to carry out tasks in accordance with the interests of the principal, which includes delegating some decision-making authority to the agent. Agency theory in the public sector is the relationship between society and government or it can also be the relationship between local government and central government. Regional governments receive duties and authority from the central government which must be accountable back to the central government. However, it should not be overlooked that regional governments must also maximize the welfare of their own regions. Agency relationships in the public sector, especially in government, can be seen in financial performance, one of which is the budget preparation process.

Economic growth

Economic growth is an effort to increase production capacity to achieve additional output, which is measured using Gross Domestic Product (GDP) and Gross Regional Domestic Product (GRDP) in a region (Adisasmita, Rahardjo 2013). Economic growth is the process of increasing per capita output in the long term. Todaro, Smith (2006) argue that economic growth is an increase in results or output resulting from an escalation of production factors used in society's production process.

Regional Financial Performance**Effectiveness Ratio**

This effectiveness ratio describes the regional government's ability to realize planned regional original income (PAD) compared to targets set based on the region's real potential. The regional ability to carry out its duties is categorized as effective if the resulting ratio reaches a minimum of 1 (one) or 100%. The higher the effectiveness ratio, the better the performance of regional capabilities (Putri et al., 2020). The formula used in calculating this ratio is:

$$\text{Effectiveness} = \frac{\text{Realization of PAD}}{\text{Plan of PAD}} \times 100\%$$

Efficiency Ratio

The efficiency ratio is a comparison between the amount of costs incurred to obtain income and the actual income received (Maulina & Rhea, 2019). The smaller the efficiency ratio means the better the performance of local government. The formula used in calculating this ratio is:

$$\text{Efficiency} = \frac{\text{the amount of costs incurred}}{\text{the actual income received}} 100\%$$

METHOD

The research method used is quantitative research, with the type of research used is replication research. The data used is secondary data in the form of district/city budget realization reports in North Sumatra Province for 2018-2022. The population in this research is budget realization reports from 33 districts/cities in North Sumatra Province. Samples were selected using the saturated sample method. The data collection method was carried out using documentation studies by collecting supporting data from reference books, journals and collecting secondary data from reports published by the Central Statistics Agency (BPS) of North Sumatra Province .

Data analysis

Data analysis in this study used the Partial Least Square (PLS) method. Partial Least Square (PLS) is a solution method for Structural Equation Modeling (SEM). Partial Least Square is a predictive technique that can handle many independent variables, even if multicollinearity occurs between these variables (Ramzan and Khan, 2010). According to Jogyanto and Abdillah (2009), PLS can be used for variant-based Structural Equation

Modeling (SEM) analysis which can simultaneously test measurement models as well as test structural models. There are two parts of the analysis carried out in the PLS method, namely:

Assessing the Outer Model or Measurement Model

Outer model testing is a measurement method that connects indicators with latent variables. Outer model analysis is carried out to ensure that the measurements used are suitable for use as measurements. Because the variables are built with formative indicators, it is assumed that the indicators are not correlated with each other. Thus, in this research it is not necessary to test the reliability of the formative construct (Ghozali 2017). Assess the outer model of the formative construct by looking at the weight value of each indicator and its significance value. The recommended weight value is above 0.50 and the T-statistic above 1.645 with a confidence level of 95% ($\alpha = 0.05$) (one tailed). The VIF of the outer model is said to be maximum if it is 10. So for VIF values below 10 it is declared free from multicollinearity (Ghozali 2017).

Assessing the Inner Model or Structural Model

The inner model describes the relationship between latent variables based on substantive theory (Ghozali 2017). The structural model was evaluated using R-square for the dependent construct and t test as well as the significance of the structural path parameter coefficients (Ghozali 2017). The R-square value shows the magnitude of the influence of the independent variable on the dependent variable. The R-square results are said to be good if ≥ 0.67 ; moderate if ≥ 0.33 ; and weak if ≤ 0.19 (Ghozali 2017).

RESULTS

Data analysis in this research uses the Warp-PLS structural equation method by dividing it into 2 research periods. The initial step in this research was carried out by conducting an outer model test on each variable or partially to see the feasibility of each variable. Next, carry out a linear model test to determine the influence of the independent and dependent variables using path analysis. Outer Model Evaluation (Measurement Model), In evaluating the outer model with formative indicators in this study, the significant weight value for each latent variable was <0.01 (sign). Apart from that, the VIF value to see multicollinearity in a model for the collinearity value for each latent variable is obtained with a value of 0.000. It can be concluded that, this means that all indicators are declared valid and meet the reliability indicators. Evaluation of Inner Model (Structural Model), Evaluation of the structural model is carried out by looking at the R Square value, which explains the level of influence of certain exogenous variables on endogenous latent variables. There are 3 model classifications seen from the R Square value, namely strong or substantial (0.67), moderate (0.33), and weak (0.19) (Chin 1998). The R Square value in the research can be seen in table 1.1.

Table 1.1 R Square

	R Square
Economic growth	0.009

Table 1 shows that the R² value is 0.009. A value of 0.009 indicates that the Effectiveness Ratio and Efficiency Ratio variables influence Regional Economic Growth by 0.9 percent while the remaining 99.1 percent is influenced by other variables outside the research. The results of R² mean that the predictive value obtained is relatively small or has a low influence. This means it is necessary to add several other variables in order to increase the R Square value. The next step is hypothesis testing, which can be seen from the values of the path coefficient. The direction of the relationship between constructs is indicated by the original sample value. The relationship between constructs is said to be positive if the original sample value is positive, and vice versa. Next, an assessment of the level of significance is carried out as indicated by the T-statistics value. The influence of the relationship between constructs is said to be real and significant if it has a T-statistics value > T-table. This research uses an alpha value of 5% so that the T-statistics value is > 1.96 and the p-value < 0.05. The path coefficient value for this research can be seen in table 1.2

Table 1.2 Path Coefficient Value

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Hypothesis
effectiveness (X1) -> economic growth (Y)	0.089	0.091	0.042	2,108	0.035	Accepted
efficiency (X2) -> economic growth (Y)	0.026	0.03	0.095	0.271	0.786	Rejected

DISCUSSION

The Effect of Effectiveness on Economic Growth

The results of the hypothesis test obtained a value of 0.089 and a t-statistic value of 2.108 with a P-value (significant) of 0.035, which is smaller than 0.05. This indicates that effectiveness has a significant and influential effect on economic growth, so the first hypothesis of this research is accepted. This is in accordance with research conducted by Ernawati (2024), Haq, et al., (2023), Saputra, et al. (2023). Effectiveness has a significant and influential effect on economic growth, meaning that the effectiveness of regional government performance in realizing PAD influences the rate of regional economic growth. The regional ability to increase PAD as measured by the PAD effectiveness ratio determines the government's ability to implement regional economic policies which have an impact on increasing the rate of economic growth.

The Effect of Efficiency on Economic Growth

The results of the hypothesis test obtained a value of 0.026 and a t-statistic value of 0.271 with a P-value (significant) of 0.786, greater than 0.05. This indicates that efficiency has no effect on regional economic growth, so the second hypothesis of this research is rejected. These results are in line with research conducted by Akbar, et al., (2021), Nahak, et al. (2022), Adipura et al (2022) which states that efficiency has no effect on regional economic growth. However, the results of this study are not in line with research conducted by Haq, et al., (2023), Saputra, et al. (2023), Suryaningsih et al. (2022) which states that the

Efficiency Ratio has an effect on economic growth. Economic growth is greatly influenced by government policies in implementing development as stated in regional expenditure allocations, especially in direct government expenditure allocations. This means that regional governments have not been able to manage their finances well, that is, they have not been able to maximize regional income attainment and reduce regional expenditure. Research data shows that during 2018-2022 the efficiency ratio of districts/cities in Sumatra Province could not be said to be efficient in managing its income and expenditure, so the research found that financial efficiency did not have a significant effect on economic growth.

CONCLUSION

Regional economic growth is a process of improving economic conditions that occur in an area on an ongoing basis in an effort to move towards a situation that is considered better than the previous time. It needs to be paid attention to and maintained in order to maintain the stability of the standard of living of the people living in that area. The Effectiveness Ratio and Efficiency Ratio were chosen to see their effect on the economic growth of districts/cities in North Sumatra Province. The research results show that the effectiveness ratio has a direct effect on regional economic growth, while the efficiency ratio has no effect on regional economic growth. This indicates that the comparison of expenditure and income as well as plans to obtain income in the districts/cities of North Sumatra Province are still relatively inefficient so that their contribution does not affect regional economic growth. The results of the research show that the effectiveness ratio and efficiency ratio are still relatively small or low in their influence on the economic growth of districts/cities in North Sumatra Province, so it is recommended that further research add new variables or ratios apart from the effectiveness ratio and efficiency ratio, to test the results on growth regional economy of districts/cities in North Sumatra Province.

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