



Regional Financial Performance Before and After Covid-19 Vaccine Policy

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Abstract. The purpose of this research is to compare the provincial governments' financial performance in Indonesia before and after the implementation of the COVID-19 vaccine program. This study's regional financial performance measures the ratio of independence, effectiveness, efficiency, activity, and growth. In this analysis, 34 provinces in Indonesia served as the population sample. In order to complete this analysis, secondary information from the Regional Financial Statements in 2020 and 2021 was used. For this analysis, we employ the Paired Samples T-Test. Using the activity ratio as a gauge of regional financial performance, the tests revealed no statistically significant differences between the pre- and post-covid-19 vaccination eras. Comparing regional economic performance indicators such the independence ratio, effectiveness ratio, efficiency ratio, and growth ratio from before and after the implementation of the Covid-19 vaccination policy, significant variations were found.

Keywords: Covid-19 Vaccine Policy · Financial Performance · Local Government

1 Introduction

The Covid-19 outbreak is engulfing almost all parts of the world. Covid-19 has quite severe symptoms with its rapid spread. On March 2, 2020, the Indonesian president declared that there had been an official transmission of Covid-19 in Indonesia. According to the United Cities and Local Government (UCLG) [1], in one of its articles entitled “The Impact of the Covid-19 Pandemic on Subnational Finances, Emergency Governance for Cities and Regions,” explaining the emergency caused by Covid-19 has shifted the interests of finance, especially on the health of the local and national economy. Petrovskaya et al. [2] research show Covid-19 is detrimental to the world economy, and poverty has increased dramatically in developing countries.

Governments at all levels need to take action in response to the Covid-19 epidemic because of the extreme volatility and magnitude of the associated economic, fiscal, and social issues. The OECD [3] says the only long-term plan for combating Covid-19 is to create a vaccine effective enough to vaccinate the whole human population. On January 13, 2021, the government issued a Covid-19 vaccination program in Indonesia, carried out at the state palace. Through the Vaccination Program, it is hoped that health and

economic recovery will return to normal. Schools began to meet face-to-face, the malls were filled with people, and offices began to be active again. The arrival of the Covid-19 vaccine promises a return to normality and stability in the economy.

According to the Central Statistics Agency (BPS) [4], the Indonesian economy in 2021 grow by 3.96%, which is higher than the achievement in 2020, which experienced a growth decline of -2.07%. Because of this, the production sector of the Health Services and Social Activities Business Field expanded by 10.46%. In 2021, a cluster of provinces in Java will have the most impact on Indonesia's economic geography. Provinces on Java saw a 3.66% boost in economic output, and their combined GDP contribution rose to 57.89%.

Dwijayanti and Ruserlistyanti [5] states to assess a region's financial performance, it is necessary to measure regional financial performance. Good performance measurement shows that the organization that is run can be said to be successful. Performance measurement can see the extent to which performance has been achieved and see how far a leader's achievements are. Performance measurement can be used as an organizational monitoring tool. In agency theory, there are asymmetric information constraints so that the information in the financial statements owned by the agent can be presented in full (full disclosure).

This background encourages research on Regional Financial Performance Before, and After the Covid-19 Vaccine Policy carried out by the Provincial Government in Indonesia. With this research, we hope to compare regional economic performance in 2020 and 2021, before and after the rollout of the Covid-19 vaccination strategy.

2 Literatur Review

2.1 Regional Financial Performance

Zafra-Gomez et al. [6] states that financial performance is a good measuring tool in assessing the performance of local government management. Performance is said to be done well if the achievement is planned. Halim [7] states APBD financial ratio analysis is the method for analyzing the performance of government regions in financial management. Several ratios that can be derived from APBD's financial data and utilized in this study, namely:

Independence ratio. Regions with a good level of independence indicate that their region has utilized their regional potential optimally and independently in their regional autonomy affairs.

$$\text{Independence} = \frac{\text{PAD Realization}}{\text{Regional Income Realization}} \times 100$$

Effectiveness ratio. The effectiveness of regional original income describes how much the local government achieves the target of local revenue in the APBD.

$$\text{Effectiveness} = \frac{\text{PAD Realization}}{\text{PAD Budget}} \times 100$$

Efficiency ratio. If the efficiency ratio is greater than 100%, then the region can be said to have implemented budget efficiency. Conversely, if it is lower, it suggests wasteful spending.

$$\text{Efficiency} = \frac{\text{Regional Income Realization}}{\text{Regional Expenditure Realization}} \times 100$$

Activity ratio. The activity ratio explains how local governments allocate cash to the expenditure sector. This study utilizes metrics from the capital expenditure sector to determine the extent to which local governments prioritize the financing of community-beneficial facilities and infrastructure during the Covid-19 pandemic.

$$\text{Activity} = \frac{\text{Capital Expenditure Realization}}{\text{Regional Expenditure Realization}} \times 100$$

Growth ratio. Success at the regional level can be tracked from one time period to the next using the growth ratio. The ratio of PAD development is used in this analysis.

$$\text{Growth} = \frac{\text{PAD}_n \text{ Realization} - (\text{PAD Realization} - 1)}{\text{PAD Realization} - 1} \times 100$$

2.2 Hypothesis

The Covid-19 pandemic that occurred at the beginning of 2020 caused many economic activities to be hampered, so economic activities experienced disruption, which also impacted various other areas of life. Research by Khan et al. [8] states the government has issued several guidelines and measures aimed at reducing the spread of Covid-19 and halting its transmission. The only sustainable method of combating Covid-19 is to develop a vaccine to the point where the entire world can be vaccinated against it [9]. So that the Covid-19 vaccine policy issued by the government becomes a solution for public health which will affect economic growth, a good economy can affect the measurement of regional financial performance, which has also improved due to the Covid-19 vaccine policy.

Asri [10] states good performance measurement shows that the organization that is run can be said to be successful. Performance measurement can see the extent to which performance has been achieved and how far a leader's achievements are. Because it refers to rewards and punishments, performance measurement can be used as an organizational monitoring tool. In agency theory, there are asymmetric information constraints so that the information in the financial statements owned by the agent can be presented in full (full disclosure).

The research of Klimanov et al. [11] revealed that Russia did not exhibit any effects of Covid-19 on the APBD in the first quarter, but that the influence of Covid-19 was not felt until the second quarter, which is when the impact of the crisis arose. Research conducted by Agnika et al. [12] demonstrate that the ratio of capital expenditure to GDP is appropriate, that the ratio of growth has dropped, that the ratio of PAD effectiveness is high, and that the financial efficiency ratio has gone from low to high in 2019 and 2020 for the Subang Regency APBD. Research conducted by Onibala et al. [13] Southeast

Minahasa Regency's financial performance during Covid-19 was shown to have declined from the previous year due to the aforementioned phenomenon. Research conducted by Rahmawati and Kiswaran [14] shows according to the findings of research conducted on provincial governments in Indonesia, there were significant differences in the ratio of local tax contributions and the ratio of capital expenditure ratios before and during Covid-19. Conversely, there were no statistically significant shifts in the ratios of fiscal decentralization, independence, or retribution contributions between areas before and after Covid-19. Based on the discussion that has been presented, the hypotheses in this study are:

H₁: There is a difference in the ratio of independence of the provincial government in Indonesia before and after the Covid-19 vaccine policy.

H₂: There is a difference in the effectiveness ratio of the provincial government in Indonesia before and after the Covid-19 vaccine policy.

H₃: There is a difference in the efficiency ratio of the provincial government in Indonesia before and after the Covid-19 vaccine policy.

H₄: There is a difference in the ratio of provincial government activities in Indonesia before and after the Covid-19 vaccine policy.

H₅: There is a difference in the growth ratio of the provincial government in Indonesia before and after the Covid-19 vaccine policy.

3 Methodology and Data Analysis

For the years 2020 and 2021, this analysis makes use of secondary data, specifically the APBD Realization Report. The information can be found on the DJPK website [15], which belongs to the Ministry of Finance. All provinces in Indonesia were represented in this study's population, with 34 provinces in 2020 (before the implementation of the Covid-19 vaccine policy) and 34 provinces in 2021 (after the implementation of the Covid-19 vaccine policy). This study is part of the census research project, which indicates that there is just one demographic group used for the sample in this investigation. Because all of the variables in this study followed a normal distribution, the SPSS application with the Paired Sample T-Test was utilized for the analysis of the data.

4 Research Result and Discussion

4.1 Regional Financial Independence Ratio Test

Table 1 shows the value of Sig. (2-tailed) of $0.000 < 0.05$. This means that there is a difference in the independence ratio before and after the Covid-19 vaccine policy, so it can be concluded that H₁ is accepted. The results of the Mean Paired Differences test

Table 1. Test Results Of Independence Variables

Pair	t	Df	Sig. (2-tailed)	Mean Paired Differences
Independence_20 - Independence_21	-5,355	33	,000	-2,29324

Table 2. Test Results Of Effectiveness Variables

Pair	t	Df	Sig. (2-tailed)	Mean Paired Differences
Effectiveness_20 - Effectiveness_21	-6,853	33	,000	-15,00294

show an increase in the average value of 2.29324 in the regional financial independence ratio from 2020 to 2021. As seen here, provincial government cash receipts of PAD in 2021 are higher than those in 2020, before the beginning of Covid-19. Probably because the community's financial resources have grown since 2021, when the Covid-19 vaccine program was put into effect.

4.2 Regional Financial Effectiveness Ratio Test

Table 2 shows the value of Sig. (2-tailed) of $0.000 < 0.05$. This means that there is a difference in the effectiveness ratio before and after the Covid-19 vaccine policy, so it can be concluded that H2 is accepted. The results of the Mean Paired Differences test show an increase in the average value of 15,00294 in the regional financial effectiveness ratio from 2020 to 2021. These findings demonstrate that the policy regarding the Covid-19 vaccination has expedited the recovery of public health, which in turn has an effect on the improvement of the community's economy. When compared to the previous year, which was when the Covid-19 outbreak initially started, the realization of PAD carried out by the provincial government after the Covid-19 vaccine policy had also increased. This was due to the growing community economy.

4.3 Regional Financial Efficiency Ratio Test

Table 3 shows the value of Sig. (2-tailed) of $0.044 < 0.05$. This means that there is a difference in the efficiency ratio before and after the Covid-19 vaccine policy, so it can be concluded that H3 is accepted. The results of the Mean Paired Differences test show an increase in the average value of 3.06299 in the regional financial efficiency ratio from 2020 to 2021. These results show that district and city governments are more efficient after adopting the Covid-19 immunization program since their revenues exceed their expenditures. The community's economy is more stable now than it was during the start of the Covid-19 outbreak, the year before the Covid-19 vaccine policy was enacted, which may explain the rise in revenue. In addition, the central government is continuing to provide transfer funds, the value of which is relatively significant in each region, for the purpose of dealing with Covid-19. Then, government investment, in conjunction

Table 3. Test Results Of Efficiency Variable

Pair	T	Df	Sig. (2-tailed)	Mean Paired Differences
Efficiency_20 - Efficiency_21	-2,000	33	,044	-3,06299

Table 4. Test Results Of Activity Variabless

Pair	t	Df	Sig. (2-tailed)	Mean Paired Differences
Activity_20 - Activity_21	-,493	33	,625	-,36143

Table 5. Test Results Of Growth Variables

Pair	t	Df	Sig. (2-tailed)	Mean Paired Differences
Growth_20 - Growth_21	-7,784	33	,000	-22,86924

with the Covid-19 vaccine program, sped up the recovery of public health to the point where the amount of money that was actually spent ended up being less than it had been at the beginning of the Covid-19 outbreak.

4.4 Regional Financial Activity Ratio Test

Table 4 shows the value of Sig. (2-tailed) of $0.625 > 0.05$. This means that there is no difference in the ratio of activity before and after the Covid-19 vaccine policy, so it can be concluded that H4 was rejected. The results of the Mean Paired Differences test show an increase in the average value of 0.36143 in the regional financial activity ratio from 2020 to 2021. According to the findings, there is not a discernible difference between the years 2020 and 2021. It's possible that this is because the province government still needs to concentrate on regional expenditure in order to deal with Covid-19, which was issued as a result of unanticipated spending.

4.5 Regional Financial Growth Ratio Test

Table 5 shows the value of Sig. (2-tailed) of $0.000 < 0.05$. This means that there is difference in the ratio of growth before and after the Covid-19 vaccine policy, so it can be concluded that H5 was accepted. The results of the Mean Paired Differences test show an increase in the average value of 22.86924 in the ratio of regional financial activity from 2020 to 2021. These results suggest that regional tax and levy revenues have increased since the Covid-19 immunization campaign, allowing PAD to grow. The amount of PAD will grow in 2021 as a result of the government's policy on the Covid-19 immunization, which is one of the many that raise or lower the level of revenue. Covid-19 vaccination policy, which increased people's capacity to engage in economic activities, may be to blame for this. If there are commercial endeavors in the area, the provincial government may earn more PAD.

5 Implication and Suggestion for Future Research

This research suggests that the Covid-19 Vaccine program in Indonesia has affected the province's fiscal performance since it was put into place to counteract the pandemic. This shift is reflected in the dissimilarities between the regions with respect to their

financial autonomy, effectiveness, efficiency, activity, and development. Prior to and during the rollout of the Covid-19 immunization strategy, there was substantial variation in measures of regional economic independence, efficacy, efficiency, and growth. This suggests that the Covid-19 vaccination strategy has strengthened the local economy more than the previous year, which has a direct effect on the financial performance of the region. Only the regional financial activity ratio does not alter significantly before and after the implementation of the Covid-19 vaccination strategy. This may be the result of the province government's continued focus on regional spending to address Covid-19, which was issued due to unforeseen expenditures. This study is limited by the observation of data for only two years, commencing with the onset of Covid-19 in 2020 and concluding with the Covid-19 vaccine policy in 2021. Consequently, this study only employs a handful of factors that are deemed representative of the measurement of local government financial performance. It is anticipated that suggestions for additional research will require additional research time. A longer observation period provides more reliable results about the financial success of local governments during the Covid-19 outbreak, and it is anticipated that future research will identify additional indicators that may be used to quantify regional financial performance.

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