

# Analysis of the Impact of the Covid-19 Pandemic on the Financial Performance of Provincial Governments in Indonesia

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**Abstract.** This study aims to determine the impact of the Covid-19 pandemic on the financial performance of 34 provincial governments in Indonesia. The method used in this research is quantitative research with secondary data analysis. The test equipment used is the paired sample t-test and the Wilcoxon signed-rank test. The data used are in the form of Financial Statements for 2020 and 2019. The test results show a positive difference in financial performance as measured by the degree of decentralization. A negative difference appears in the results of economic performance as measured by the ratio of regional financial dependence, regional financial independence, and growth of regional original income. The test results also show no difference in economic performance before and during the pandemic as measured by the harmony ratio of operating expenditures and the effectiveness ratio of local revenue.

**Keywords:** Covid-19 pandemic, financial performance, local government

## 1 Introduction

The spread of Covid-19, which was declared a pandemic on March 9, 2020, significantly impacted the world, including Indonesia. The OECD [1] says the ongoing Covid-19 outbreak puts the government under pressure to provide emergency support to the health sector and the economy. Many countries' budget adjustment measures have increased in size and scope since Covid-19 came to light. One of the policies taken by the Indonesian government is to optimize state and local budgets for preventing the spread of the virus and handling health impacts. State and regional financial policies begin with Government Regulations in place of Law Number 1 of 2020 [2]. This law regulates Policies in the Regional Finance Sector in Article 3 paragraph (1). This paragraph states that in the context of implementing policies in regional finance, local governments have the authority to prioritize budget allocations for specific activities/refocusing. The local government can also change the distribution and use of regional revenue and expenditure budgets/Anggaran Pendapatan dan Belanja Daerah (APBD). Suwanda [3] argues that the government must appropriately manage policies to handle the pandemic so that program implementation runs without causing problems. Park and Maher's [4] research shows that fiscal decentralization causes variations in state and local fiscal capacity. Each level of government must have solid fiscal coordination, both in the mitigation process and in the upcoming recovery phase.

Financially independent local governments can suffer higher revenue losses because the transfer value from the central government remains small as before the pandemic [5]. The

Director-General of Fiscal Balance of the Ministry of Finance explains that in October 2020, the total regional income/pendapatan asli daerah (PAD) nationally reached IDR194.36 trillion. In the same period last year, it reached IDR228.24 trillion [6]. The Deputy Chairperson of the Household Affairs Agency of the House of Representatives of the Republic of Indonesia [7] revealed that the local government's fiscal dependence increased during the pandemic. The regional financial dependence ratio is one of the indicators to assess regional financial performance. Regional financial performance is an economic analysis that comes from the budget that has been determined and implemented in the management of local government [8]. This background encourages research on the Analysis of the Impact of the Covid-19 Pandemic on the Financial Performance of Provincial Governments in Indonesia. This study aims to determine whether there are differences in regional financial performance before and during the pandemic. The update in this study is in the form of testing financial performance variables on local governments in Indonesia during the pandemic.

## 2 Literature Review

### Regional Financial Performance

Sucipto in Junarwati [9] states that local government financial performance is the level of achievement of work in regional finance. This performance indicates provincial revenues and expenditures using economic indicators and formed from the Regional Head Accountability Report elements in APBD calculations [10]. Due to the importance of performance, the next step is performance measurement, which assesses the success or failure of an organization [11]. Mahmudi [12] proposes several measures of local government financial performance, among others:

*Degree of decentralization* This ratio shows local revenue/PAD contribution to total regional revenue. The higher the percentage of PAD, the higher the provincial government's ability to implement decentralization. The formula measures this ratio:

$$DD = \frac{PAD}{Total\ Income} \quad (1)$$

*Regional financial dependence ratio* This ratio measures by comparing the transfer income received by the provincial government with total regional revenues. The higher this ratio, the greater the level of dependence of local governments on gains from the central government. The formula measures this ratio:

$$RFDR = \frac{Transfer\ Income}{Total\ Income} \quad (2)$$

*Operational expenditure harmony ratio* This ratio informs the portion of regional expenditure used for operating costs. In general, the proportion of operating expenses dominates total provincial spending, which is 0.6 to 0.9. The formula measures this ratio:

$$OEHR = \frac{Operating\ Expenditure}{Total\ Expense} \quad (3)$$

*Regional financial independence ratio* This ratio compares the amount of PAD divided by the total transfer income from the central government and provincial loans. The higher this ratio, the more independent the local government.

The formula measures this ratio:

$$\text{RFIR} = \frac{\text{PAD}}{\text{Transfer Income} + \text{Loan}} \quad (4)$$

*PAD effectiveness ratio* This ratio shows the ability of local governments to mobilize PAD by following the target. The PAD effectiveness ratio compares the PAD realization with the PAD target. The formula measures this ratio:

$$\text{EPAD} = \frac{\text{Realization of PAD}}{\text{Budget of PAD}} \quad (5)$$

*PAD growth ratio* This ratio measures how much the local government can maintain and increase the success from one period to the next. The formula measures this ratio:

$$\text{GPAD} = \frac{\text{Realization of PAD}_n - \text{Realization of PAD}_{n-1}}{\text{Realization of PAD}_{n-1}} \quad (6)$$

### Hypothesis

Research by Batool and Sahi [13] related to performance during the global financial crisis shows changes in economic performance in the United States and the United Kingdom from 2007 to 2016. Research by Huynh et al. [14] shows that the financial performance of the industrial sector that received financial assistance from the government was relatively stable during the pandemic. In contrast, the industrial sector that did not receive government assistance experienced a decline in economic performance during the Covid-19 pandemic. Research by Onibala et al. [15] at the Southeast Minahasa Regency Government showed changes in regional financial performance in increasing degrees of decentralization, PAD effectiveness ratios, operating expenditure harmony ratios, and decreasing regional financial independence ratios during the Covid-19 pandemic compared to 2019. Anas' [16] research shows no significant difference in economic performance in the Provincial Government of the Special Capital Region of Jakarta, East Java, and North Sumatra during the pandemic. Previous studies related to financial performance when certain events occur encourage research to test hypotheses:

- H1: there is a difference in the degree of decentralization before and during the pandemic.
- H2: there is a difference in the ratio of regional financial dependence before and during the pandemic.
- H3: there is a difference in the harmony ratio of operating expenses before and during the pandemic.
- H4: there is a difference in the ratio of regional financial independence before and during the pandemic.
- H5: there is a difference in the effectiveness ratio of PAD before and during the pandemic.
- H6: there is a difference in the ratio of PAD growth before and during the pandemic.

### 3 Methodology and Data Analysis

The type of research used in this research is quantitative descriptive. The sampling technique was purposive sampling with a total of 34 provinces. The kind of data used is secondary data in the form of Regional Government Financial Reports contained in the Audit Results Report issued by The Audit Board of the Republic of Indonesia, with 2020 as the period during the pandemic and 2019 as the period before the pandemic. The data were analyzed using the SPSS application with paired sample t-test and Wilcoxon signed-rank test. Paired sample t-

test used for variables which normality test showed usually distributed data, namely decentralization degree, regional financial dependence ratio, and harmony of operating expenditures. Wilcoxon signed-rank test used for variables which normality test showed the data not normally distributed, namely the degree of regional financial independence, the effectiveness of PAD, and growth of PAD.

## 4 Research Result and Discussion

### Test Results of Decentralization Degree

**Table 1.** Test results of DD variable

Pair	t	Df	Sig. (2-tailed)	Mean Paired Differences
DD_2019 – DD_2020	4.604	33	0.000	0.01882

Table 1 shows the probability value/sig. 2-tailed ie  $0.000 < 0.05$ . In addition, the table shows that the t count is  $4.604 > t$  table is 2.035. The probability value is below the significance level and t counts above the t table, then H1 is accepted. There are differences in financial performance as measured by the degree of decentralization before and during the pandemic. The test results show an average decrease of 0.01882 in the degree of decentralization from 2019 to 2020. This decrease indicates the reduced ability of local governments to generate PAD during the pandemic. PAD, which includes taxes and levies, decreased in line with the reduced purchasing power of the people. Sharifi and Khavarian-Garmsir [17] revealed that the Covid-19 pandemic had lowered the tax base in many regions.

### Test Results of Regional Financial Dependency Ratio

**Table 2.** Test results of RFDR variable

Pair	t	df	Sig. (2-tailed)	Mean Paired Differences
RFDR_2019 – RFDR_2020	-3.973	33	0.000	-0.01618

Table 2 shows the probability value/sig. 2-tailed ie  $0.000 < 0.05$ . In addition, the table shows that the t count is  $3.973 > t$  table is 2.035. If the probability value is below the significance level and t count above the t table, H2 is accepted. There are differences in financial performance as measured by the regional financial dependence ratio before and during the pandemic. The test results state an average increase of 0.01618 in the regional financial dependence ratio from 2019 to 2020. This increase shows that the transfer income component from the central government increased during the pandemic. This increase in transfers is carried out to support the handling of Covid-19 in areas of the provincial government.

### Test Results of Operational Expenditure Harmony Ratio

**Table 3.** Test results of OEHR variable

Pair	t	df	Sig. (2-tailed)	Mean Paired Differences
OEHR_2019 – OEHR_2020	1.240	33	0.224	0.01059

Table 3 shows the probability value/sig. 2-tailed ie  $0.224 > 0.05$ . In addition, the table shows that the t count is  $1.240 < t$  table is 2.035. Suppose the probability value is above the significance level and t is below the t table. In that case, H3 is rejected, which means no difference in financial performance as measured by the harmony ratio of operating expenses before and during the pandemic. The test results state an average decrease of 0.01059 in the harmony ratio of operating

expenditures from 2019 to 2020. This decrease indicates a reduction in operating expenditures for the provincial government during the pandemic. Operational expenditure, including personnel and goods expenditures, will not focus in 2020 because regional expenditure shift to handling Covid-19 issued through unexpected spending.

#### Test Results of Regional Financial Independence Ratio

**Table 4.** Test results of RFIR variable

Negative Ranks	Positive Ranks	Ties	Z	Asymp. Sig. (2-tailed)
25	8	1	-3.894	0.000

Table 4 shows the probability/asymptotic values. Sig. 2-tailed is  $0.000 < 0.05$ , then H<sub>4</sub> is accepted, which means there is a difference in financial performance as measured by the ratio of regional financial independence before and during the pandemic. Test results show the Negative Ranks (RFIR in 2020 < in 2019) are 25 samples, Positive Ranks (RFIR in 2020 > in 2019) are eight samples, and Ties (RFIR in 2020 = in 2019) are 1 sample. Opposing Ranks in most examples (25 from 34) show a decrease in the ratio of regional financial independence from 2019 to 2020. These results illustrate that PAD received by provincial treasuries in 2020 decreased compared to 2019 due to the decline in the community's economic capacity due to the pandemic.

#### Test Results of PAD Effectiveness Ratio

**Table 5.** Test results of EPAD variable

Negative Ranks	Positive Ranks	Ties	Z	Asymp. Sig. (2-tailed)
16	16	2	-0.608	0.543

Table 5 shows the probability/asymptotic values. Sig. 2-tailed is  $0.543 > 0.05$ , then H<sub>5</sub> is rejected, which means there is no difference in financial performance as measured by the PAD effectiveness ratio before and during the pandemic. The test results show the Negative Ranks (EPAD in 2020 < in 2019) are 16 samples, the Positive Ranks (EPAD in 2020 > in 2019) are 16 samples, and Ties (EPAD in 2020 = in 2019) are two samples. The exact 16 number of models in Negative and Positive Ranks shows that the provincial government's average ability to achieve PAD realization compared to its target in 2020 is the same as in 2019. The stability of EPAD during the pandemic supports by changes in the 2020 APBD, which budgeted PAD lower than 2019. For example, the Provincial Government of the Special Capital Region of Jakarta has budgeted PAD for 2020 of IDR38 trillion. This value has decreased compared to the 2019 budget of IDR50 trillion. The Gorontalo Provincial Government has budgeted PAD for 2020 of IDR337 billion. This value has decreased compared to the 2019 budget of IDR422 billion [18].

#### Test Results of PAD Growth Ratio

**Table 6.** Test results of GPAD variable

Negative Ranks	Positive Ranks	Ties	Z	Asymp. Sig. (2-tailed)
33	1	0	-4.934	0.000

Table 6 shows the probability/asymptotic values. Sig. 2-tailed is  $0.000 < 0.05$ , then H<sub>6</sub> is accepted, which means there is a difference in financial performance as measured by the PAD growth ratio before and during the pandemic. The test results show that the Negative Ranks (GPAD in 2020 < in 2019) are 33, and the Positive Ranks (GPAD in 2020 > in 2019) are one sample. Most of the samples (33 from 34) show a decrease in the PAD growth ratio from 2019 to 2020. These

results illustrate that PAD growth declined during the pandemic due to reduced regional tax and levy revenues. The decline in revenue is one of the impacts of various policies taken by the government during the pandemic. For example, reducing population mobility and business or business trips affects hotel occupancy rates, decreasing hotel taxes. This finding is in line with research by Lai and Wong [19], which states that the pandemic has plunged the tourism sector, especially hospitality, into an unprecedented recession.

## 5 Implication and Suggestion for Future Research

This research implies that the financial performance of local governments has changed with the Covid-19 pandemic. This change is evidenced by differences in economic performance as measured by the degree of decentralization, the ratio of regional financial dependence, regional financial independence, and PAD growth. The degree of decentralization shows a positive change, according to the positive value of the *t* count. Positive change can also be clear from the average value before the pandemic that is higher than during the pandemic. The regional financial dependence ratio shows a negative change, according to the negative value on the *t* count. Negative change can also be clear from the average value before the pandemic lower than during the pandemic. The ratio of regional financial independence and PAD growth shows a negative change. This change is visible from the negative *Z* count and the dominance of the Negative Ranks on each variable which shows that the variable's value during the pandemic is smaller than before. These results strengthen the results of previous studies that regional financial performance can change with the presence of a specific event. The results of this study can be a suggestion for the government in setting policies to improve financial performance. This result aligns with the national economic recovery policy strategy drawn up by the Coordinating Minister for the Economy. The strategy includes a fiscal stimulus to provide a multiplier impact on job creation, directing the purchase of locally produced goods and programs to increase people's consumption power [20]. Suggestions for further research are to increase the research period until the post-pandemic and add samples to each province's city/district government with the highest number of positive cases of Covid-19 during the pandemic.

## Acknowledgement

The author would like to thank The Audit Board of the Republic of Indonesia, which has provided data in audited financial reports from every province of Indonesia. Also, thank The Indonesia Endowment Fund for Education, which has provided a master's degree of scholarship for the author.

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