

THE MODERATION EFFECT OF COVID-19 ON REGIONAL INCOME OF THE PROVINCIAL GOVERNMENT IN INDONESIA

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Abstract: *This study aims to examine the effect of Regional Income (PAD) on Capital Expenditures with Covid-19 as moderating variable. The population of this study was 136 provincial governments in Indonesia in 2019-2020. Also, this study used purposive sampling method and documentation as the data collection technique. The analysis technique used the Moderated Regression Analysis method. Based on the results of statistical tests, PAD had a significant positive effect on Capital Expenditures, but the Covid-19 had an insignificant negative effect on PAD and Capital Expenditures.*

Keywords: *Regional Income, Capital Expenditures, Covid-19*

1. Introduction

The Covid-19 pandemic that has hit the world, including Indonesia, impacted on the Realization of Government Budgets. Further, it has an impact on the revision of the Regional Government Budget (APBD) of regional governments in Indonesia. Like Medan, Indonesia, it experienced a reduction in the regional budget of up to 40 per cent in 2020 due to the Covid-19 pandemic. The current budget will be diverted for handling Covid-19 in Medan, Indonesia. The same thing happened to the Surabaya, Indonesia, where the target of achieving PAD of Surabaya, Indonesia in 2020 need to be revised due to the Covid-19 pandemic. The Central Java Provincial Budget has also changed budget allocations during the Covid-19 pandemic.

According to Juniawan and Suryantini (2018), Regional Income (PAD) is part of regional income extracted from available resources in the region that are not included in the balancing fund and other revenues. The amount of PAD received by local governments will be adjusted to allocating capital expenditures and regional needs. Therefore, the higher PAD will positively affect the allocation of capital expenditures. This allows the provincial government to create infrastructure and advance the region by prioritizing its capital expenditures. Based on Paramartha and Budiasih (2016) and Aqnisa (2016), Regional Income positively affects capital expenditure. However, Dwianto (2016) believed that local revenue has a negative effect on capital expenditure.

Regional income is one of the important sources of income for a region. In 2019, each province's Regional income (PAD) has increased from the previous year. Most of the PAD is allocated to capital expenditures for infrastructure. The components that play the main role are local taxes, legitimate PAD, management of separated regional assets, and regional levies. Unfortunately, at the beginning of 2020, the Covid-19 pandemic decrease PAD in each region. The highest impact occurred in hotel and restaurant taxes because there were almost no visitors

to them. This is due to the implementation of social restrictions in each region. The allocation in the existing budget will be diverted to handling Covid-19.

Based on previous research, regional income in capital expenditures still has a research gap in the form of differences in research results on capital expenditures. Then, this study adds the Covid-19 pandemic in 2020 as moderating variable, which has not been the concern of previous researches.

2. Literature Review

Based on agency theory, if the application of agency theory can lead to positive things in the form of efficiency, the government can run it well, transparently, democratically, fairly, and responsibly. However, if negative things arise in opportunistic behavior such as the selfishness of each agent (executive) having an information advantage but the principal (legislative) taking advantage of the superiority of their power, this indicates the emergence of unproductive actions in the administration of the provincial government as a whole. According to Pradana and Handayani (2017), if capital expenditure can increase public participation in development, the quality of public services will increase.

One of the regional income indicators is independence in managing regional finances. The greater the level of independence of a region, the greater the ratio of regional income. When a region receives funds from the central government, namely PAD, the region as a part of regional government will optimize the income obtained in accordance with the laws and regulations. Mandatory management expenditures are prioritized as improving the community's quality of life in fulfilling regional obligations, which are manifested in the form of improving essential services, health, education, and decent social and public facilities. Therefore, the higher the PAD, the more likely it will be allocated to capital expenditures.

Paramartha and Budiasih (2016) state that local revenue positively affects capital expenditure. This research is in line with Juniawan and Suryantini (2018) and Pradana and Handayani (2017), that local revenue positively affects capital expenditure. Thus, the first hypothesis is formulated as follows:

H1 = Regional income has a positive effect on Capital Expenditures.

When a region receives funds from the central government, namely PAD, the region as a part of regional government will optimize the income obtained according to the laws and regulations. However, during the COVID-19 pandemic in 2020, PAD in the provincial government decreased due to the implementation of the Large-Scale Social Restrictions for approximately 5 months. Likewise, the allocation of PAD funds is more optimized for the needs of handling the Covid-19 pandemic in each province.

Dwianto (2016) believed that regional income has a negative effect on capital expenditure. This is in line with Setiyani (2015), that regional income has a negative effect on capital expenditure. Therefore, the second hypothesis is formulated as follows:

H2 = The covid-19 pandemic moderates' regional income and capital expenditures.

3. Methodology

The population in this study is the Provincial Government of Indonesia in 2019-2020. This study used a purposive sampling method, which is a method of selecting samples by determining a criterion. The sample criteria used in this study are as follows: *first*, the Provincial Government

reports financial statements per period from 2019-2020. *Second*, all indicators in this study are contained in the financial statements of provincial governments in Indonesia.

Regional income is income obtained from the region and then collected based on regional regulations in accordance with statutory regulations. The regional income variable is measured using the following formula: $PAD = Ln (\text{regional taxes} + \text{regional levies} + \text{separated regional wealth management results} + \text{other legalized regional income})$.

Capital expenditures are Regional Revenue and Expenditure Budget (APBD) for goods and services used for expenditures made in the procurement of tangible fixed assets that have a useful value of more than twelve months to be used in government activities (Badrudin, 2017). The capital expenditure variable is measured using the formula: $Ln (\text{Capital Expenditure} = \text{land expenditure} + \text{equipment and machinery expenditure} + \text{building and building expenditure} + \text{road, irrigation and network expenditure} + \text{another asset expenditure})$. The Covid-19 variable is an event of the spread of an infectious disease caused by a new type of coronavirus that is spread throughout the world (Wikipedia, 2020). The measuring instruments used for the Covid-19 variable are: Code 1 is used for the year the Covid-19 Pandemic occurred and code 0 is used for the year before the Covid-19 Pandemic.

Hypothesis testing in this study used Moderated Regression Analysis (MRA). According to Ghozali (2013), Moderated Regression Analysis is different from sub-group analysis, because it uses an analytical approach that maintains sample integrity and provides a basis for controlling the influence of moderating variables. The following equation can describe the relationship between the independent variable and the dependent variable:

$$Y_i = \alpha + \beta_1 X_i + \beta_3 X_i Z_i + \varepsilon$$

Note :

Y_i = Capital Expenditure

α = Constant

β = Regression Coefficient

X = Regional Income

Z = The Covid-19 pandemic

ε = Standard Error

4. Results And Discussion

The sample of this study was 34 provincial government in Indonesia that issue reports on the realization of the APBD (Regional Expenditure Budget) per period in 2019-2020. The report was obtained from the official website: <https://jateng.bps.go.id/>. Sampling was described in the following table:

Table 1
Sample distribution

Criteria	Total Provinces
Total Provinces in Indonesia	34
2 year period (2019-2020)	136

Source: Data processed in 2021

Table 2
Descriptive Statistical Analysis

	N	Minimum	Maximum	Mean
PAD	136	53076596000	57561162309000	3630209624139.71
BM	136	24423621000	18041247738000	918271177882.35
Covid-19	136	.00	1.00	.5000

Source: Data processed in 2021

Table 2 above shows that the number of observations studied was 136, based on two periods of the APBD report (2019-2020). The Capital Expenditure (BM) variable has a minimum value of IDR 24 billion, namely in Banten Province, Indonesia in 2020 in first period and a maximum value of IDR 18 Trillion in DKI Jakarta Province, Indonesia in 2020 in the second period. The BM variable shows an average value of IDR 918 billion. This means that during the 2019-2020 per period, the average capital expenditure of IDR 918 billion was obtained. The Regional income (PAD) variable has a minimum value of IDR 53 billion, namely in North Maluku Province, Indonesia in 2020 at the first period and a maximum value of IDR 57 Trillion in DKI Jakarta Province, Indonesia in 2020, at the second period. The PAD variable shows an average value of IDR 3,630 Trillion, meaning that during the 2019-2020 per period, an average PAD of IDR 3.630 trillion was obtained. The Pandemic variable has a minimum value of 0, namely in Provinces that issue APBD reports in 2019 at first and second period, then a maximum value of 1 in Provinces issuing APBD reports in 2020 at first and second period. The covid-19 variable shows an average value of 0.500. This means that 50.0% of all APBD expenditures for 2019-2020 are experiencing the effects of the pandemic.

Table 3
Initial Kolmogorov-Smirnov (K-S) Statistical Test

		Unstandardized Residual
N		136
Normal Parameters ^{a,b}	Mean	.0000880
	Std. Deviation	903272271699.29210000
Most Extreme Differences	Absolute	.167
	Positive	.129
	Negative	-.167
Test Statistic		.167
Asymp. Sig. (2-tailed)		.000 ^c

Source: Data processed in 2021

In table 3 above, based on a set sample, it does not meet the normality assumption after being tested for normality because the Kolmogorov-Smirnov significance value is $0.000 < 0.05$. In conclusion, the data is not normally distributed. The abnormal data is normalized by eliminating the extreme data that appears. The omitted data were four samples, so that it became 132 observations to be tested for normality again. The results of the following test obtained

results as in table 4. After conducting normality test, it met the normality assumption because the K-S significance value was $0.083 > 0.05$, meaning that the data were normally distributed.

Table 4
Second Kolmogorov-Smirnov (K-S) Statistical Test

		Unstandardized Residual
N		132
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	3.74540343
Most Extreme Differences	Absolute	.073
	Positive	.051
	Negative	-.073
Test Statistic		.073
Asymp. Sig. (2-tailed)		.083 ^c

Source: Data processed in 2021.

Based on the results of the multicollinearity test, each variable has a VIF value of < 10 , namely LnPAD2 of 1,000 and Pandemic of 1,000. Thus, there is no multicollinearity or tolerance value for each variable > 0.10 . Then, the results of the autocorrelation test having a Durbin Watson value of 0.809 will be compared with the table value at a significance level of 5%, the number of samples is 132 respondents with two independent variables, found the upper limit value (du) = 1.747 and the lower limit (dl) = 1.685. In conclusion, there is an autocorrelation because the value of Durbin Watson = 0.809 lies between below the lower limit ($0 < d = 0.809 < dl = 1.685$). While the results of the Glejser test in table 5 show that the independent variable and the moderating variable are significant because the significance value of the independent variable (LnPAD2) and the moderating variable has a significant value above 0.05. That is, there is no symptom of heteroscedasticity in the regression model.

Based on the R Square test results showing 0.288, the dependent variable that can be explained by the independent variable and the moderating variable is 28.8%, while other variables outside the research model explain the remaining 71.2%.

Table 6
Regression Test Results

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
3	(Constant)	11.652	3.193		3.649	.000
	LnPAD2	.494	.095	.544	5.187	.000
	COVID-29 PANDEMIC	.351	4.531	.040	.077	.938
	MODERATION	-.015	.135	-.057	-.110	.912

Dependent Variable: Capital Expenditure

Source: Data processed in 2021

The first hypothesis is accepted. It is proven that $\text{sig } t = 0.000 < 0.05$ and the t count value is $5.187 > t \text{ table } 1.978$, meaning that PAD has a positive and significant effect on Capital Expenditure, so that it can be said that the higher PAD, the higher Capital Expenditure. According to Badrudin (2017), PAD is income earned by regions collected based on local regulations by statutory regulations. One of the PAD indicators is being independent in managing regional finances. The higher the PAD, the higher the level of independence of a region. This is under agency theory as the theoretical basis used, which has the same goal between the agent (executive) as the central government and the principal (legislative) as the central government, which causes PAD to have a positive effect and test results have a significant positive effect on capital expenditure. This shows that the government is running well, transparently, fairly, democratically, and responsibly. This research is supported by previous research conducted by Paramartha and Budiasih (2016), that PAD has a positive effect on capital expenditure. This research is in line with Juniawan and Suryantini (2018), namely PAD has a positive effect on Capital Expenditure. This is due to the implementation of provincial funding, which increases every year.

The results of the second hypothesis test were rejected because the value of $\text{sig } t = 0.912 > 0.05$ and $t \text{ count } -0.110 > t \text{ table } -1.978$, meaning that the Covid-19 pandemic had a negative and insignificant effect or could be said to be unable to moderate the PAD variable on the Capital Expenditure variable. This is because in the data during the Covid-19 period, there are still a few cases of Covid that occur in Indonesia. Merdeka (2020) recorded that the development of new positive cases of COVID-19 until the end of 2020 increased by 8,074 with a total of 743,198 cases, so that the diversion of the budget for the Covid-19 budget is still slight. As stated by Kontan (2020), Audit Board of the Republic of Indonesia (BPK) noted that the total budget for handling Covid-19 reached IDR. 1,035.2 trillion, consisting of the APBN, APBD, BUMN, and BUMD. This research is in line with research of Maulana and Nubatonis (2020), that dummy variable (the Covid-19) has no significant effect based on the t -test but has a significant effect when tested together using the F test. According to Wikipedia (2020), the Covid-19 pandemic is an event of the spread of an infectious disease caused by a new type of coronavirus that has spread throughout the world.

5. Conclusion, Limitations, And Future Research Agenda

This study proves that PAD has a significant positive effect on capital expenditures. The greater the PAD, the higher the capital expenditure, and vice versa. However, the Covid-19 moderating variable has a negative and insignificant effect on PAD on capital expenditures. This is because the COVID-19 in Indonesia in the sample of this study is still slight.

This research has attempted to develop previous research. However, there are still some limitations to this research. *First*, the small number of cases of covid-19 that occurred in Indonesia in this study impacted the results of this study. For future research, it can add years of research to obtain maximum results. *Second*, researchers ignored external factors such as data collection only through the BPS website, the implementation of lockdown in the community, and the increasing number of Covid-19 cases in Indonesia. Thus, future research can consider these factors.

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