



The Effect of Regional Fiscal Capacity and Capital Expenditure on Economic Growth in Central Java Province

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Abstract

This study will review the outcome of the fiscal policies and capital expenditure of the region on economic growth on Central Java Province in the 2021-2024 period. In panel data regression analysis performed with EViews 12 using quantitative approach. The findings indicate that regional retribution and capital expenditure have a positive as well as significant influence to the economic growth whereas the same is not true of the regional tax. This analysis shedding light on the fact that long term economic growth is possible by making good fiscal management and a specific focus on investment by the government. In practice, the results offer some strategic information to policymakers that can improve regional financial autonomy, and efficiency of capital expenditure and inclusion and sustainability of regional development.

Keywords: Regional Fiscal Policy, Regional Retribution, Regional Tax, Capital Expenditure, Economic Growth, Central Java Province

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INTRODUCTION

One of the most crucial tools for assisting development, also empowering people economic growth is the regional financial management. By use of proper fiscal policies, the local governments not only undergo this role of

controlling the income and expenditure but also actively contribute to real economic activity in the society. Regional financial capacity is a crucial indicator that in the context of fiscal decentralization gives an indication as to whether a region is in a position to fund its

development needs without overreliance on the central government.

Regional revenue is organized in the Regional Medium-Term Development Plan (RPJMD) of Central Java Province through 2018-2023 whereby some major sources of funds are used to implement development programs and public services.

Such sources are Regional Original Revenue (PAD) that reveals the fiscal capacities of provinces obtained by local taxes, levies, and other legitimate local incomes, General Allocation Funds (DAU) that are intended to decrease disparities in fiscal resources of regions and finance routine state spending, Special Allocation Funds (DAK) that are assigned to particular priority areas and development activity, and so forth.

Such a revenue system demonstrates that transfer funds still play quite a high fiscal role, which makes the provincial government still aim to maximize PAD as a more sustainable source of finance. Conversely, the constrained fiscal capability is another major challenge, since the regional development requirements are way beyond the financial capabilities (Regional Regulation of Central Java Province No. 5/2019, 2019).

In order to overcome these shortcomings, the Central Java government has focused on expenditure control in constructive sectors of the government like infrastructure, education and health and empowering the economy of the people. It is estimated that capital investment in these industries increases productivity, creation of more job markets, and economic competitiveness in the region.

This is in conformity with the theory of endogenous growth that was suggested by Romer (1990) which explains that sustainable

economic growth is a phenomenon that can be developed internally by way of making investments as a government, innovating and enhancing the quality of human capital. In this respect, sufficient fiscal capacity is a basic precondition of the quality public investment, and the capital expenditure is one of the fiscal tools to support the structure of the regional economy.

The fiscal performance of the Central Java Province and capital expenditure have shown dynamic and positive trends in the last five years. According to the estimates provided by empirical data of the Central Statistics Agency (BPS, 2024) and Directorate General of Fiscal Balance (DJPK, 2024), the growth rate of the Regional Original Revenue (PAD) was 6.4% per year on average, which unfolds that the fiscal capacity of the province improved.

Regional taxes have been the biggest contributors to this increase with over 70 percent of total PAD made up by the taxes of the region and this indicates a significant presence of local tax revenues in financing the development of the region. Nevertheless, the fiscal independence ratio of Central Java falls within the range of 25-30, which is a high degree of dependence on transfers at the central government (Kusuma & Anwar, 2024).

In the meantime, the ratio of capitalizing spending to overall spending in the region was in the 14-18% interval in 2020-2023 with roads, bridges, and education infrastructure being the primary areas. Whereas this capital expenditure contribution has not yet been optimal, it has aided in the economic development of Central Java that stood at 5.11% in 2023, above the national average of 5.04% (BPS, 2024). The manufacturing, trade, and agriculture industries have come to be the primary drivers of growth,

with the poverty rate decreasing by 11.25 in 2020 to 10.11 in 2023. These data suggest that the synergy between the enhancement of the fiscal capacity and capital expenditure positively affected the economic recovery and the post-pandemic economic strengthening of the region (Maulidia et al., 2023).

Nevertheless, there are still a number of challenges to the efficiency of the local fiscal policy in optimizing economic growth. The main challenges in the regional financial management are high reliance on central transfers, low PAD per capita, and inefficient allocation of capital expenditure. Also, the governance concerns, the quality of the institutions, and the flaws in the planning and monitoring of the project tend to hamper the utilization of productive spending.

The past studies have given diverse results about the correlation between fiscal capacity, capital expenditure and economic growth. In Central Java, Kusuma and Anwar (2024) discovered that fiscal decentralization level bring a positive impact to economic growth but failed to draw a clear line between routine and development expenditure.

In the meantime, Juma'eh et al. (2020) demonstrated that fiscal capacity and capital spending in Central Kalimantan bring a positive effect to the economic growth along with community well-being, but the government effects varied based on local settings and the quality of governance.

The lack of a particular study in this area proves that this issue requires a more specific research on the role of fiscal capacity and capital spending in the environment of Central Java Province, particularly in the post-COVID-19 environment (2021-2024). The time is also critical because it is the phase of economic

recovery that requires proper fiscal policies to boost the growth in the region. The paper aims to solve the gaps in the existing literature analysis by providing a thorough analysis of the role of regional fiscal capacity and capital expenditure in stimulating the growth of the Central Java Province.

It is likely that this study will reinforce the empirical evidence that agrees with the endogenous growth theory by Romer in the sense that economic growth can be boosted by the effective fiscal policy and investments made by the government. In practical sense, the outcomes of this study are likely to assist in offering applicable recommendations to the local governments on how to design more efficient and effective fiscal policies.

The analysis also highlights the need to maximize capital expenditure distribution by providing information on how to enhance regional financial autonomy, as well as the management of revenues. These are aimed at assisting the attainment of inclusive, equitable and sustainable economic development, so that the benefits of development are more equally distributed between regions and communities.

RESEARCH METHODS

This study employs a quantitative research design in that, the researcher utilizes panel data regression analysis to settle the impact of regional retribution, regional taxes and capital expenditure to economic growth on Central Java Province. With the usage of panel data which are cross-sectional and time-series, the research can identify the changes in relation to regions and times and come up with an all-inclusive and strong examination of the connection among fiscal variables and the performance of the region economy. This strategy was adopted to

portray the dynamic interdependence of the variables of fiscal policies of the regions in ensuring economic growth is sustainable.

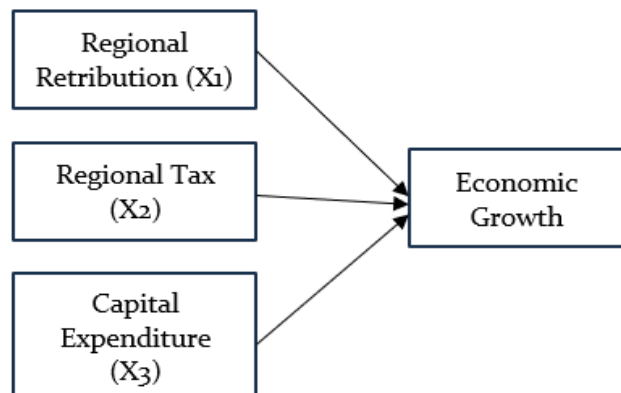


Figure 1. Framework

Source: Data Processed, 2025

The convenience sampling method was used in determining the sample of the research with the criterion being that the regencies/cities in the Central Java which had all the research variables data during the entire period of the observation being done. The secondary data utilized in this research is the data of the Central Java Province Statistics Agency (BPS) and the Directorate General of Fiscal Balance (DJPK) during the period of observation, 2017-2024.

A documentary study method was used in the collection of the data, which entailed the gathering of data, as well as the systematic processing of the data, which were published by the relevant governmental institutions. Reliable and authoritative secondary data will guarantee the credibility and accuracy of the analysis done in the investigation of the relationship among the regional fiscal variables and economic growth.

The reason why this model was selected is that the author desired to understand the extent to which the fiscal capacity (regional retribution

and regional tax) and capital expenditure to the Economic Growth. The overall formula of multiple linear regression is shown below:

$$EG = a + b_1 RR + b_2 RT + b_3 CE + e$$

Where EG means Economic Growth; RR is Regional Retribution; RT is Regional Tax; CE is Capital Expenditure. The present study employed the EViews 12 software to perform data analysis through the application of the panel data regression. The estimation procedures are the Common Effect Model (CEM), Fixed Effect Model (FEM), also the Random Effect Model (REM) which were used to ascertain the finest applicable model to utilize on the data.

The option of the suitable model was settled applying the Chow test and the Hausman test. Furthermore, to assure the reliability and validity of the regression results, classical assumption tests were executed, including multicollinearity testing utilizing the Variance Inflation Factor (VIF) and normality testing utilizing the Jarque–Bera (J-B) test.

Hypothesis testing from this study was constructed utilizing the F-test to evaluate the simultaneous effect from all independent variables to economic growth, and the t-test to assess the partial effect of each independent variable individually. In addition, the coefficient of determination, represented by R^2 and Adjusted R^2 , was employed to assess the extent to which variations in economic growth could be elaborated by regional retribution, regional taxes, and capital expenditure.

RESULTS AND DISCUSSION

The Chow test was applied to decide if the Common Effect Model (CEM) or the Fixed Effect

Model (FEM) was more suitable or not. The results showed a probability value below 0.05 (0.000), stipulating the need to proceed with the Hausman test.

Table 1. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	130.117696	(34,102)	0.0000

Source: Data Processed, 2025

The Hausman test was conducted to determine the appropriate model amidst the Fixed Effect Model (FEM) and the Random Effect Model (REM). The analysis produced a probability value was <0.05 (0.000), so the FEM was the most qualified model, and therefore the LM test was not required.

Table 2. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	57.161267	3	0.0000

Source: Data Processed, 2025

Derived from the outcomes of the Chow and Hausman tests, the selected estimation method is the Error Generalized Least Square (EGLS), and the preferred model is the Fixed Effect Model (FEM) with cross-section weight and cross-section seemingly unrelated residuals (SUR/PSCE).

Coefficient determination test is conducted to evaluate how well the model elaborates variations on the dependent variable. Because the R^2 value tends to increase each time an independent variable is added (even if it is not significant), the more accurate Adjusted R^2 is used. Based on the table above, adjusted R -

square value is 0.99, or 99%. This coefficient of determination unfolds that the independent variables (regional levies, regional taxes, and capital expenditure) account for 99% of the variation from economic growth during the 2021–2024 period, while the rest 1% is affected by other determinants not involved on the research model.

Table 3. Coefficient Determination

Variable	Coefficient
R-squared	0.992682
Adjusted R-squared	0.990027
S.E. of regression	2575.412
F-statistic	373.9474
Prob(F-statistic)	0.000000

Source: Data Processed, 2025

The t-test is utilized to appraise the individual effect of each independent variable to the dependent variable. Derived from the results of the t-test hypothesis testing, three conclusions could be formed.

Table 4. t-test

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	11864.63	210.626	56.33025	0.000
X1_Regional Retribution	0.004726	0.00130	3.635742	0.004
X2_Regional Tax	0.001571	0.00160	0.980344	0.329
X3_Capital Expenditure	0.009240	0.00134	6.891118	0.000

Source: Data Processed, 2025

First, the t-test for variable X1 (Regional Retribution) unfolds a calculated t-value of 3.635741, that surpasses the t-table value, with a significance level of $0.004 < 0.05$. Then, the

alternative (H_a) is accepted and null hypothesis (H_o) is rejected meaning that the retribution of the region own a key role in economic growth in 2021-2024.

Second, The t-test of variable X_2 (Regional Tax) generates a t-value calculated of 0.980344 that is beneath t-table and a significance level of 0.3292 surpasses 0.05. Hence, alternative hypothesis (H_a) is rejected and null hypothesis (H_o) is accepted stipulating that the effect of regional tax is not significant to the economic growth in the 2021-2024 period.

Third, The t-test of variable X_3 (Capital Expenditure) unfolds a calculated t -value of 6.89118, which is larger than the t -table figure of 1.99299, and a significance level of 0.000 beneath 0.05. Based on this, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected, which suggests that the impact of capital expenditure to economic growth in the 2021-2024 period is significant.

Table 5. F-Test

Variable	Coefficient
R-squared	0.992682
Adjusted R-squared	0.990027
S.E. of regression	2575.412
F-statistic	373.9474
Prob(F-statistic)	0.000000

Source: Data Processed, 2025

F-test is performed to find out the simultaneous effect of all the independent variables to the dependent variable. According to the findings proposed in the table, the value of F- 373.9474 surpass the F-table value 1.99299, and the value of significance of 0.00000 is beneath 0.05. Thus, H_o is rejected and H_a accepted, which means that the combination of regional retribution, regional taxes, also capital

expenditure is significantly effective in economic growth in the 2021-2024 period. Derived from t-test value, t-value 3.635741 is more than the t-value of 1.99299, and the t-value is 0.004 beneath 0.05.

Thus, the alternative (H_a) is accepted and null hypothesis (H_o) is rejected meaning that the impact of levies regionally to economic growth on Central Java Province in the 2021-2024 period is positive and significant. This observation is confirmity with the research results of Rambe and Syafii (2025) and Zulfikar et al. (2025) which showed that regional levies have a positive even significant impact to the growth of the economy.

Theoretically these findings reinforce the findings of Romer (1990) that growth in the economy can grow endogenously due to fiscal policy which also incorporates region levies. Paying levies on services and permits issued by local governments does not only contribute to the fiscal revenue to the government but also acts as a source of finances to build infrastructure that facilitates economic activity.

Enhancing the infrastructure and security of the region promotes growth in investments, creation of job opportunities, and the economic cycle. Therefore, higher income of regional levies will directly help in enhancing the welfare of the community and boosting the economic growth of an area.

The t-test values show that the t-value of 0.980344 is below the t-table value of 1.99299 and the level of significance of 0.3292 surpass 0.05. As such, the alternative (H_a) is rejected and null (H_o) accepted and the outcomes imply that, there is no significant impact of the regional taxes to economic growth on Central Java Province at the study period. This observation is in conformity with the otucomes of a examination executed by Manalu et al.

(2023), which informs that the increase/decrease in tax revenues within the region might not necessarily spur economic development when the tax is not channeled effectively to the productive sectors.

The fact that the growth of the economies is not significantly affected by the regional taxes suggests that augments to the regional taxes have not been fully reflected on productive economic performance. This could be as a result of the regional tax structure which remains to be consumer dominated in terms of taxes like motor vehicle taxes and the restaurant taxes which do not produce a direct impact on the economic output of a region.

Moreover, the difference in the fiscal potential between the regions and the ineffective nature of tax collection in multiple regencies/cities within Central Java also serve as the factors that promote the poor contribution of taxes to growth (DJPK, 2024).

The t-test outcomes reveal that t-value of 6.89118 surpass t-table 1.99299, and the level of significance is 0.000 that is beneath 0.05. Thus, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected, which proves that it has been found a positive as well as significant effect of capital expenditure to the economic growth of the Central Java Province within the 2021-2024.

This finding is in conformity with the research of Solekha and Hanafi (2025) which affirm the positive and dramatic role of capital expenditure in enhancing economic growth. Besides, this fact is an indicator of the endogenous growth theory (Romer, 1990) which highlights the significance of governmental investment in other sectors including infrastructure, education, and health to boost productivity in the long run. As economic

growth accelerates, government expenditure, particularly capital spending tends to increase in order to accommodate rising public needs and development demands.

Increased capital expenditure plays a crucial role in building infrastructure that supports productivity and community welfare. It is proven that in Central Java itself, increased capital expenditure in the road, bridge, and educational infrastructure sectors (BPS, 2024) contributes to increasing the efficiency of the distribution of goods and services, as well as encouraging regional economic growth after the pandemic.

The results of the F-test stipulate that the calculated F-value of 373.9474 surpasses the F-table value of 1.99299, with a significance level of $0.00000 < 0.05$. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, demonstrating that regional levies, regional taxes, and capital expenditure jointly bring a significant effect to economic growth on Central Java Province during the 2021-2024 period.

This result unfolds that there is a synergistic relationship between the amount of revenue in regions (levies and taxes) and government spending in stimulating economic growth. An increase in fiscal revenue means that the government is better placed to use capital expenditure in a productive manner that results in the accelerated growth of the economic output.

CONCLUSION

According to the findings of the analysis, it can be asserted that fiscal policies in the region embody a key role in promoting economic development in Central Java Province in the 2021-2024 timeframe. The results suggest that

regional levies and capital expenditure positively as well as significantly bring impact to the economic growth, but the same cannot be said about the effect of regional tax.

This means that the fiscal policy can only be effective based not just on the volume of revenue generated by the government, but also how the money is used and allocated to the productive sectors.

Regional retributions also help in growth through offering direct fiscal ability to local governments to fund infrastructure and local government services that facilitate the economic activity. In the meantime, capital expenditure is a major stimulant in the construction of the necessary infrastructure like roads, bridges, education, and health facilities which have a combined effect of increasing productivity and welfare of the community.

Nonetheless, the minor impact of regional taxes indicates that a large proportion of the taxation is either being channeled in non productive regions or being directed to normal expenditures instead of development based programmes.

Also, there is the concomitant nature of the regional levies, taxes, and capital expenditures, which suggests the synergy between regional revenue and expenditure can be critical to sustainable regional economic growth. This is in favor of the endogenous growth theory developed by Romer (1990) who asserts that the key strategy to achieving long term growth of the region is public investment and proper fiscal management.

As such, local governments are advised to improve fiscal autonomy by maximizing revenues and focus on capital expenditure in areas that possess a high multiplier on the economic productivity and social wellbeing.

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