

The Impact of Local Own-Source Revenue, General Allocation Funds, Revenue-Sharing Funds, and Capital Expenditures on Regional Gross Domestic Product in West Nusa Tenggara Province, 2019–2025

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ABSTRACT

This study examines how the Gross Regional Domestic Product (GRDP) of West Nusa Tenggara Province is affected by Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Revenue Sharing Fund (DBH), and Capital Expenditure. It uses a quantitative approach backed by an associative research design. The study relies on secondary panel data consisting of 70 observations from ten regencies and cities in West Nusa Tenggara Province from 2019 to 2025. To evaluate the impact of independent variables on GRDP, panel data regression analysis is used. The empirical results show that local revenue and revenue-sharing funds have a positive and statistically significant effect on GRDP, while general allocation funds and capital expenditure also have a positive effect, but are not statistically significant on GRDP. Collectively, local own-source revenue, general allocation funds, revenue-sharing funds, and capital expenditure have a significant effect on GRDP. The findings highlight the importance of strengthening regional fiscal capacity, particularly through the effective management and optimization of local own-source revenue and revenue-sharing funds, to support regional economic activity and development.

INTRODUCTION

Regional economic development is a crucial component of national development because regional economic performance reflects a region's ability to expand economic activity and

production capacity. One of the main indicators of regional economic performance is Gross Regional Domestic Product (GRDP), which reflects the value added generated by economic activities within a region over a specific period. Under decentralization, Subnational governments have greater authority to manage resources and determine development priorities according to regional characteristics and needs. This arrangement is closely associated with fiscal decentralization, through which local governments manage revenues and expenditures to support public governance and regional economic development. (Saraswati et al., 2023) explain that fiscal decentralization shapes the intergovernmental financial dynamics facilitating regional advancement. In this context, Local Own-Source Revenue (PAD) and intergovernmental transfers represent important sources of regional fiscal capacity, while capital expenditures can support productive economic activities through the development of infrastructure and public facilities.

Previous research has reported varying findings regarding the effects of regional fiscal instruments on economic performance. (Hanifah & Sulaeman, 2022) found that there's a significant positive link between economic growth and local revenue, and showed that general allocation funds (DAU) and revenue-sharing funds (DBH) positively impact economic growth. Similarly, (Priambodo et al., 2024) reported that PAD had a positive and significant effect on GRDP, whereas the DAU, DBH, and capital expenditures showed no statistically significant individual effects. (Verlandes et al., 2025) also found a positive and significant effect of PAD on economic growth, while the DAU, DBH, and capital expenditures were not statistically significant. (Nurmala et al., 2025) found that PAD, transfer funds, and capital expenditures jointly affected economic growth, although individually only transfer funds had a significant effect. In contrast, (I. M. P. Y. Putra et al., 2026) reported PAD had a negative and statistically insignificant effect on GRDP. These divergent findings indicate that the effects of fiscal instruments may vary depending on regional characteristics, fiscal capacity, and prevailing economic conditions.

West Nusa Tenggara (NTB) Province provides a relevant setting for further investigation because its eight regencies and two cities have different economic potential, fiscal capacity, capacity to generate PAD, dependence on intergovernmental transfers, and development needs. These differences became particularly important during the COVID-19 pandemic and the subsequent economic recovery. The study data illustrate this regional heterogeneity. GRDP in Bima Regency declined from 8,234.04 in 2019 to 7,943.64 in 2020, while GRDP in West Lombok Regency decreased from 10,894.64 to 10,128.30 over the same period. Following the pandemic shock, GRDP generally increased again, although the pace and pattern of recovery differed across regencies and cities. Such conditions suggest that the relationship between regional fiscal capacity, government spending, and economic performance cannot necessarily be assumed to be uniform across NTB.

Despite the existing literature, empirical evidence on the effects of PAD, DAU, DBH, and capital expenditures on GRDP at the regency/city level in NTB remains limited. Previous

studies in NTB have generally focused on economic growth or provincial aggregate data, while studies using GRDP as the dependent variable have predominantly examined other regions. Moreover, intergovernmental transfers are often analyzed in aggregate, limiting the identification of the distinct roles of DAU and DBH. Therefore, this study addresses the gap by examining these four fiscal instruments separately at the regency/city level using balanced panel data from ten regencies and cities in NTB during 2019–2025, comprising 70 observations and covering the pre-pandemic, COVID-19, and recovery periods. The novelty lies in providing a disaggregated assessment of the individual effects of PAD, DAU, DBH, and capital expenditures on GRDP across ten regencies and cities in NTB within this regional and temporal context. Using panel data econometrics, This study seeks to assess the effects of these fiscal instruments on GRDP and provide empirical insights for strengthening fiscal management and regional economic development in NTB.

RESEARCH METHOD

The influence of local fiscal factors on GRDP was studied using a quantitative approach and an associative research design. This study examines ten cities and regencies in the province of West Nusa Tenggara between 2019 and 2025. The study used secondary data consisting of balanced panel data with 70 observations, combining time-series and cross-sectional characteristics that allow for the analysis of individual and temporal heterogeneity (Ghanim, 2026). The Directorate General of Fiscal Balance (DJPK), the Ministry of Finance of the Republic of Indonesia, and the Central Bureau of Statistics (BPS) of West Nusa Tenggara Province were the sources of this information. GRDP at constant 2010 prices was used as the dependent variable, while the independent variables consisted of PAD, DAU, DBH, and Capital Expenditures. All variables were measured in billion Indonesian rupiah. EViews software is used to analyze panel regression data. The econometric model was specified as follows:

$$GDRP_{it} = \alpha + \beta_1 PAD_{it} + \beta_2 DAU_{it} + \beta_3 DBH_{it} + \beta_4 CE_{it} + \varepsilon_{it}$$

where Y represents Gross Regional Domestic Product (GRDP), X_1 represents Local Own-Source Revenue (PAD), X_2 represents General Allocation Funds (DAU), X_3 represents Revenue-Sharing Funds (DBH), and X_4 represents Capital Expenditures (CE). The subscript i represents the regency/municipality and t represents the year of observation; α denotes the constant; β_1 , β_2 , β_3 , and β_4 represent the regression coefficients; and ε_{it} represents the error term. The analysis began with descriptive statistics. Then, by using the Chow test (CEM vs. FEM) and Hausman test (FEM vs. REM), the Common Effect Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM) were selected to determine the appropriate panel data regression model (Gujarati, 2021). Diagnostic tests included multicollinearity, and heteroskedasticity tests.

After the appropriate model was selected, The estimate is based on panel data. The partial effects were assessed based on the regression coefficients, t-statistics, and probability

values, while the simultaneous effect was evaluated using the F-statistic and Prob(F-statistic). All tests were performed at a 5% significance level ($\alpha = 0.05$). How well the independent variables can explain changes in GRDP is measured by the adjusted R-squared.

FINDINGS AND DISCUSSION

Selection of a Econometric Model for Panel Data

First, the right panel data model is made to check how PAD, DAU, DBH, and Capital Expenditure affect GRDP in districts and cities in NTB Province from 2019 to 2025. The Chow test compares CEM and FEM; if FEM is picked, you go on with the Hausman test. If CEM is picked, an LM test is done to see if REM fits better.

Tabel 1. Chow and Hausman tests

Test	Prob.	Model
Chow	0,0000	FEM
Hausman	0,0000	FEM

Chow test yielded a p-value of $0.0000 < 0.05$, indicating that FEM was more suitable than CEM. The Hausman test likewise yielded a p-value of $0.0000 < 0.05$, confirming FEM as more suitable than REM. As FEM had already been established as the optimal model, the LM test was unnecessary. Thus, FEM is the final model chosen for this research.

Classical Assumption Test

Next, a classical assumption test was carried out to assess the feasibility of the model, which includes tests for multicollinearity and heteroskedasticity. These tests aim to identify high correlations between independent variables and unequal residual variances that could affect the reliability of regression estimates.

Multicollinearity Test

Table 2. Multicollinearity test

	X1	X2	X3	X4
X1	1.000000	0.528099	-0.040070	0.274321
X2	0.528099	1.000000	-0.156229	0.241739
X3	-0.040070	-0.156229	1.000000	0.308227
X4	0.274321	0.241739	0.308227	1.000000

The multicollinearity assessment indicates that all correlation coefficients among the explanatory indicators remain below 0.80. The strongest association occurs between X1 and X2, with a coefficient of 0.528099. These findings indicate that the econometric model does not exhibit multicollinearity, allowing all indicator variables to be retained for further analysis.

Heteroscedasticity Test

Table 3. Heteroscedasticity test

Indicator	Coefficient	Std. Error	t-Statistic	Prob.
C	447.2629	363.6903	1.229791	0.2239
X1	-0.266104	0.914574	-0.290960	0.7722
X2	-0.009920	0.557771	-0.017785	0.9859
X3	-0.385513	0.376115	-1.024987	0.3098
X4	0.231099	0.528903	0.436940	0.6638

The Glejser heteroskedasticity test using ABSRESID reveal that the probability values for X1 (0.7722), X2 (0.9859), X3 (0.3098), and X4 (0.6638) are all greater than 0.05. For further analysis, this econometric model does not show heteroskedasticity.

Panel Data Econometric

Table 4. Panel Data Econometric Findings Applying the FEM

Indicator	Coefficient	Std. Error	t-Statistic	Prob.
C	7563.630	593.4938	12.74425	0.0000
X1	6.610048	1.492463	4.428954	0.0000
X2	0.545432	0.910207	0.599240	0.5514
X3	2.621195	0.613770	4.270647	0.0001
X4	1.180715	0.863098	1.367996	0.1768
Impacts Specification				
Cross-section fixed (dummy indicators)				
Root MSE	678.1288	R-squared	0.980902	
Mean outcome var	10221.99	Adjusted R-squared	0.976469	
S.D. outcome var	4942.517	S.E. of econometric	758.1710	
Akaike info criterion	16.27655	Sum squared resid	32190107	
Schwarz criterion	16.72625	Log likelihood	-555.6793	
Hannan-Quinn criter.	16.45518	F-statistic	221.2552	
Durbin-Watson stat	2.264335	Prob(F-statistic)	0.000000	

Chow test makes a comparisonThe estimated panel data econometric model is expressed as follows:

$$GRDP_{it} = 7,563.63 + 6.61PAD_{it} + 0.54DAU_{it} + 2.62DBH_{it} + 1.18CE_{it} + \varepsilon_{it}$$

Interpretation of the panel data econometric model:

1. If all independent variables, PAD, DAU, DBH, and Capital Expenditure, are equal to zero, the GRDP is estimated at Rp7,563.63 billion.
2. If Local PAD increases by Rp1 billion, GRDP is expected to increase by Rp6.61 billion, ceteris paribus.
3. If the DAU increases by Rp1 billion, GRDP is expected to increase by Rp0.54 billion, ceteris paribus.

4. If the DBH increases by Rp1 billion, GRDP is expected to increase by Rp2.62 billion, *ceteris paribus*.
5. If Capital Expenditure increases by Rp1 billion, GRDP is expected to increase by Rp1.18 billion, *ceteris paribus*.

The Impact of PAD on GRDP

With a coefficient of 6.610048 and a probability value of 0.0000, which is less than the 5% significance level, the FEM estimation results demonstrate that PAD has a positive and substantial impact on GRDP in all regencies and cities in NTB Province. In other words, stronger Local Own-Source Revenue-generating capacity is linked to higher regional economic output. PAD represents the fiscal capacity of local governments to support economic development. This result is in line with neoclassical growth theory of (Solow, 1956), which places capital formation and increased production capacity as important factors in increasing output. In addition, (Romer, 1990), emphasizes that internal factors and investments that improve productivity can promote economic growth. In the context of this study, an increase in PAD reflects stronger local fiscal capability to support development activities and productive economic activities, thereby potentially increasing GRDP. Empirically, these findings align with (Savira & Fatimah, 2022), (Maisarah & Anwar, 2023), and (Farisyah et al., 2026), indicating that strengthening PAD can boost fiscal capacity and support increased local economic output.

The Impact of the DAU on GRDP

According to the FEM results, DAU has a probability value of 0.5514, which is greater than 0.05 and a coefficient of 0.545432. The results show that even though it's not statistically significant, DAU positively affects GRDP in all regencies and cities in NTB Province. Although the coefficient suggests a positive relationship, the amount of DAU received by local governments has not been sufficient to generate a statistically meaningful change in regional economic output. This may be attributed to the primary role of DAU as a mechanism for equalizing fiscal capacity across regions, rather than as funding specifically targeted at sectors that directly expand production and economic activity. In addition, when DAU is predominantly allocated to routine expenditures and the provision of public services, its contribution to strengthening productive capacity and regional output may remain limited. Therefore, a larger DAU allocation does not necessarily translate into a proportional increase in regional economic activity. Empirically, this finding aligns with (Lalimbat et al., 2025) and (Ratih & Soelistyo, 2024), who found that DAU has no significant on GRDP. These consistent findings suggest that fiscal transfers do not necessarily lead to significant improvements in regional output when they are not accompanied by effective allocation toward productive activities.

The Impact of DBH on GRDP

The results of the Fixed Effects Model (FEM) estimation show that DBH has a coefficient of 2.621195 with a probability value of $0.0001 < 0.05$. This indicates that DBH has a positive and significant effect on the GRDP of regencies/cities in NTB. These findings suggest that an increase in DBH revenue is associated with an increase in regional economic capacity. Economically, DBH contributes to strengthening the fiscal capacity of regions through additional revenue that local governments can use to meet development and public service needs. Increasing fiscal capacity gives local governments more room to respond to economic needs, maintain the quality of public services, and support various activities that boost regional productivity. With stronger fiscal capacity, dependence on limited local funding can be reduced, giving the government greater ability to sustain economic activities. This mechanism can ultimately encourage an increase in regional output, as reflected in GRDP. The significant impact also shows that DBH not only serves as an additional source of revenue for local governments but also makes a real contribution to the region's capacity to support economic activities. The larger the DBH received, the greater the fiscal capacity available to effectively support local needs. However, the amount of DBH still needs to be managed properly so that this additional fiscal capacity can be translated into productive economic activity. These findings align with (Batubara & Gunarto, 2024), (Oktaviana et al., 2025), and (Ratih & Soelistyo, 2024), which indicate that DBH affects GRDP. The similarity of these results reinforces that DBH is one of the fiscal tools that can contribute to increasing regional output by strengthening the fiscal capacity of local governments.

The Effect of Capital Expenditure on GRDP

The FEM estimation results show that capital expenditure has a coefficient of 1.180715 and a probability value of 0.1768 (>0.05). Therefore, capital expenditure has a positive effect on the GRDP of regencies and cities in NTB Province, although it is not statistically significant. It is indicated by the positive coefficient that higher capital expenditure tends to be associated with an increase in GRDP; however, the relationship is not statistically strong enough to demonstrate that increased capital expenditure consistently promotes regional economic output during the study period. Conceptually, capital expenditure represents a form of public investment aimed at providing assets and infrastructure to support productive capacity and economic activity. However, the impact of public investment on regional output may not occur immediately, as the economic benefits of newly developed assets can only emerge after they are productively utilized. Therefore, the time lag between the realization of capital expenditure and the emergence of economic benefits may explain why its effect on GRDP was not statistically significant during the observation period. This finding is consistent with (Abdullah, 2023), who found that capital expenditure had a favourable impact on GRDP that is not statistically significant. The result is also relevant to (Tahu et al., 2024), who reported that capital expenditure had no significant effect on economic growth. Although the latter study

used a different dependent variable, its findings support the argument that increased capital expenditure does not automatically lead to improved regional economic performance in the short term. Therefore, the effectiveness of capital expenditure depends not only on the amount allocated but also on the quality of implementation, the appropriateness of allocation, and the productive utilization of the assets created.

The Simultaneous Effect of PAD, DAU, DBH, and Capital Expenditure on GRDP

The Fixed Effects Model (FEM) estimation results show that PAD, DAU, DBH, and Capital Expenditure simultaneously have a significant impact on GRDP, as demonstrated by a probability value of 0.0000 (<0.05) and an F-statistic of 221.2552. This finding indicates that regional economic output is associated with the combination of fiscal capacity and government expenditure management, rather than with a single fiscal instrument. PAD represents locally generated fiscal capacity, while DAU and DBH strengthen fiscal space through intergovernmental transfers. These fiscal resources can subsequently be allocated through capital expenditure to provide public assets and facilities that support economic activities. Therefore, the integration of revenue capacity and expenditure allocation provides greater fiscal space for local governments to support public services, productive activities, and regional productivity. This finding is consistent with (D. R. Putra & Asqolani, 2023), which reported that fiscal decentralization positively and significantly affects GRDP across 33 provinces in Indonesia. (Rahman, 2024) also found that fiscal transfer funds significantly affect GRDP per capita. These findings reinforce the view that fiscal capacity and intergovernmental transfers are important instruments in supporting regional economic output. In the present study, the significant simultaneous effect indicates that PAD, DAU, DBH, and Capital Expenditure jointly contribute to explaining variations in GRDP, although not all variables show statistically significant individual effects. The model's adjusted R-squared of 0.976469 shows that PAD, DAU, DBH, and capital expenditure account for 97.65% of the variation in GRDP, with the remaining 2.35% coming from factors not included in the study. The high explanatory power reinforces the strong association between the regional fiscal structure and variations in economic output across regencies and municipalities in West Nusa Tenggara Province. Thus, these results confirm that, even though fiscal instruments vary statistically, regional fiscal capacity and budget management are important factors in determining local economic output.

CONCLUSION AND SUGGESTIONS

A study on PAD, DAU, DBH, and capital expenditure on the GRDP of regencies/cities in West Nusa Tenggara Province shows that PAD and DBH have a positive and significant effect on GRDP, while DAU and capital expenditure do not show a significant effect. Simultaneously, all four variables significantly affect GRDP. This finding shows that the impact of fiscal factors on regional output varies across instruments, but overall, the regional fiscal structure has a significant connection with GRDP. The research findings imply that local

fiscal policies should focus on improving the quality of resource management, rather than just the size of revenue or budget realization. For district/city governments, the study provides a basis to strengthen the management of PAD and DBH, while also re-evaluating the effectiveness of DAU and capital expenditure. The significant differences between instruments suggest that uniform fiscal policies do not necessarily bring the same benefits to every region. Therefore, planning and budget allocation need to take into account the conditions, needs, and economic characteristics of each district/city so that fiscal resources can contribute more effectively to the regional GDP. Regency/city governments in NTB Province are advised to maintain efforts to optimize PAD and manage DBH, as well as to improve evaluations of the effectiveness of DAU and capital expenditures. These evaluations need to focus on targeting accuracy, implementation quality, and the economic benefits of budget use. This way, fiscal management is not only about hitting budget targets but also about achieving results that support local economic activities and productivity. Future research can extend the observation period and broaden the area coverage to test the consistency of the results across different regional characteristics. In addition, adding variables such as investment, labor, infrastructure, and human resource quality can be considered to get a more comprehensive picture of the factors related to GRDP.

REFERENCES

- Abdullah, A. (2023). *Pengaruh inflasi, upah minimum provinsi, belanja modal, dan pengangguran terhadap produk domestik regional bruto di indonesia*. *ICOR: Journal Of Regional Economics*, 4(1), 11-22.
- Batubara, M. N. H., & Gunarto, T. (2024). The influence of local own-source revenue, revenue sharing funds and special allocation funds on GDRP in pesisir barat districts of Lampung Province. *Journal Of Scientific Research, Education, And Technology (JSRET)*, 3(2), 630–646.
- Farisya, D., Diswandi, D., & Firmansyah, M. (2026). The effect of local original income, regional transfer funds and capital expenditure on the rate of economic growth in districts/cities of West Nusa Tenggara Province 2016-2024. *JURNAL ECONOMINA*, 5(5), 1150–1163.
- Ghanim, B. (2026). An overview of panel data analysis in statistical and econometric research. *Iraqi Statisticians Journal*, 1–18.
- Gujarati, D. N. (2021). *Essentials of econometrics*. Sage Publications.
- Hanifah, H. I., & Sulaeman, A. S. (2022). Pertumbuhan ekonomi dan pendapatan asli daerah: studi empiris atas korelasi resiprokal. *Jurnal Dinamika Ekonomi Pembangunan*, 5(2), 146–172.
- Lalimbat, S., Kumenaung, A. G., & Rorong, I. P. F. (2025). The influence of regional original

- revenue, general allocation fund, and special allocation fund on gross regional domestic product through capital expenditure in North Sulawesi Province for the 2011–2022 period. *The Contrarian: Finance, Accounting, And Business Research*, 4(2), 57–69.
- Maisarah, M., & Anwar, K. (2023). Pengaruh pendapatan asli daerah dan jumlah penduduk terhadap produk domestik regional bruto (PDRB) kabupaten dan kota di Provinsi Aceh. *Jurnal Ekonomi Regional Unimal*, 6(1), 13–20.
- Nurmala, B., Harsono, I., Sutanto, H., Astuti, E., & Yuniarti, T. (2025). The influence of regional original revenue (PAD), transfer funds, and capital expenditure on economi. *Ganec Swara*, 19(3), 869–879.
- Oktaviana, N., Wijimulawiani, B. S., Fadlli, M. D., Kirana, T. P., Sepira, H., & Sabrina, V. R. (2025). Analysis of the influence of DBH, DAU, DAK on the GRDP in districts/cities of NTB Province 2011-2024. *IDEAS: Initiatives for Sustainable Future Development in Economy*, 2(1), 150–162.
- Priambodo, A. P., Hidayat, N. W., & Kementerian Keuangan, R. I. (2024). Pengaruh PAD, Dau, DBH, dan belanja modal terhadap pdrb dan kemiskinan di kabupaten sidoarjo. *Jurnal Manajemen Keuangan Publik*, 8(1), 1–14.
- Putra, D. R., & Asqolani, A. (2023). The effect of fiscal decentralization on gross regional domestic product and tax revenues. *IPSAR (International Public Sector Accounting Review)*, 1(2), 38–53.
- Putra, I. M. P. Y., Erawati, N. M. A., & Sudharma, I. W. P. A. (2026). Belanja daerah, pendapatan asli daerah, dan penduduk sebagai determinan PDRB kabupaten/kota di Bali. *Nusantara Hasana Journal*, 6(2), 507–515.
- Rahman, S. (2024). Exploring fiscal decentralization in indonesia: the impact of special autonomy funds on the economies of Aceh, Papua, And West Papua. *J-3p (Jurnal Pembangunan Pemberdayaan Pemerintahan)*, 118–135.
- Ratih, D., & Soelistyo, A. (2024). Pengaruh realisasi anggaran penerimaan dan belanja daerah terhadap produk domestik regional bruto Provinsi Nusa Tenggara Barat tahun 2017-2022. *Journal Of Financial Economics & Investment*, 4(1), 1–8.
- Romer, P. M. (1990). Endogenous technological change. *Journal Of Political Economy*, 98(5, part 2), s71–s102.
- Saraswati, D. F., Maharani, M., Hidayanti, N., & Firdhausya, M. U. (2023). Analisis komprehensif tentang interaksi antara sistem keuangan negara dan daerah dalam konteks desentralisasi fiskal. *Yustisi*, 10(2), 231–243.
- Savira, F., & Fatimah, S. (2022). Pengaruh PAD, belanja modal dan TPAK terhadap produk domestik regional bruto di Kabupaten/Kota Provinsi NTB tahun 2015-2020. *Jurnal Oportunitas: Ekonomi Pembangunan*, 1(1), 77–99.

- Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal Of Economics*, 70(1), 65–94.
- Tahu, G. P., Yuesti, A., Bhegawati, D. A. S., Menes, C. C., & Orbaningsih, D. (2024). The influence of regional original income and general allocation funds on economic growth with capital expenditures as an intervening variable. *Revista De Gestao Social E Ambiental*, 18(6), 1–19.
- Verlandes, Y., Isnaini, N. F., Nersiwad, N., & Purnomo, A. H. (2025). Pengaruh PAD, DAU, DBH dan belanja modal terhadap PDRB dan kemiskinan di Kabupaten Jombang. *Yudishtira Journal: Indonesian Journal of Finance and Strategy Inside*, 5(2), 266–282.