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The Effect Of Central Government Transfer Funds on Local Tax Revenue in Regency/City Governments in West Nusa Tenggara Province 2018-2025 : Analysis of the Effects of Crowding Out and Crowding In

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ABSTRACT

This study aims to analyze the influence of the General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH) on regional tax revenues and identify *crowding-out* and *crowding-in tendencies* in district/city governments in West Nusa Tenggara Province. This study uses an explanatory quantitative approach with secondary panel data covering 10 districts/cities during the 2018–2025 period. Data were obtained from the Directorate General of Fiscal Balance of the Ministry of Finance, the Central Statistics Agency, and regional government budget realization reports. The analysis was conducted using panel data regression with the *Fixed Effect Model* (FEM) approach, accompanied by partial and simultaneous hypothesis testing. The results show that the DAU has a positive and significant effect on regional tax revenues, thus indicating a *crowding-in effect* . Meanwhile, DBH has a positive but insignificant effect, while DAK has a negative but insignificant effect on regional tax revenues. Thus, the tendency of *crowding-in* in DBH and *crowding-out* in DAK is not yet supported by significant statistical evidence. Simultaneously, DAU, DAK, and DBH significantly influence regional tax revenues, with a coefficient of determination of 76.37%. This finding indicates that DAU plays a role in supporting increased regional tax revenues, while DBH shows a significant effect on regional tax revenues. trend support improvement reception tax area, but its influence Not yet significant in a way statistics . On the other hand , DAK shows trend lower reception tax area , but influence negative also not yet significant in a way statistics.

***Keywords: General Allocation Fund, Special Allocation Fund, Revenue Sharing Fund, Regional Tax,* Crowding In, Crowding Out.**

INTRODUCTION

The implementation of fiscal decentralization in Indonesia began after the enactment of Law Number 22 of 1999 concerning Regional Government and Law Number 25 of 1999 concerning Fiscal Balance between the Central and Regional Governments. This policy is part of government reform aimed at providing greater authority to regional governments in regulating and managing community interests in accordance with regional potential and characteristics (Hirawan, 2006) . Over time, the decentralization regulatory framework has

undergone several improvements through Law Number 32 of 2004, which was later replaced by Law Number 23 of 2014 concerning Regional Government, and Law Number 33 of 2004, which was subsequently replaced by Law Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments. These regulatory changes demonstrate ongoing efforts to improve the implementation of fiscal decentralization in Indonesia (Hardiana, 2023) .

These regulatory improvements strengthen the financial relationship between the central and regional governments. Law Number 1 of 2022 regulates regional revenue sources in the form of taxes and levies, Transfers to Regions (TKD), regional spending, regional financing, and synergy with national fiscal policies. These regulations are aimed at strengthening regional fiscal capacity and increasing the effectiveness of governance and public services (Lewis, 2023) .

Fiscal decentralization is the delegation of authority from the central government to regional governments in managing regional financial resources, both in terms of revenue and expenditure (Azwar, 2022) . Fiscal decentralization is expected to increase the efficiency of resource allocation because regional governments are considered to understand the needs, preferences, and characteristics of the people in their regions better than the central government (Kuncoro, 2016) . From the perspective of the Theory of Fiscal Federalism and Fiscal Decentralization, the implementation of decentralization gives authority to regional governments to manage revenue sources, obtain transfers from the central government, and regulate regional spending (Yuliana, Baiq Saripta Wijimulawiani, 2026) . This view is in line with *the Fiscal Federalism Theory* put forward by Oates (1999) , that the provision of public goods and services tailored to local preferences can improve welfare compared to the provision of uniform public services by the central government.

For fiscal decentralization to be effective, a financial relationship mechanism is needed that can maintain a balance of fiscal capacity between the central government and regional governments. One of the main instruments in this financial relationship is intergovernmental *fiscal transfers* . Intergovernmental transfers are used to align revenue capacity with regional government spending needs, reduce fiscal disparities between regions, and support equitable distribution of public services (Boadway & Shah, 2007) . In a good transfer design, transfer allocations need to consider the fiscal needs and fiscal capacity of each recipient region (Shah, 2006) .

In the Indonesian context, the intergovernmental transfer mechanism is realized through Transfers to Regions (TKD). TKD is a fund sourced from the State Budget and is part of state spending allocated and distributed to regions to be managed in order to fund the implementation of government affairs within their authority (Law of the Republic of Indonesia Number 1 of 2022; Government Regulation Number 37 of 2023) . In this study, the transfer components analyzed are the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH). These three types of transfers were chosen because they have different characteristics and purposes, allowing for different responses to local government efforts to increase regional tax revenue. DAU is more general and provides fiscal space to regions, DAK is directed towards specific needs or priorities, while DBH is awarded based on a percentage of certain revenues in the APBN and the characteristics of the recipient region.

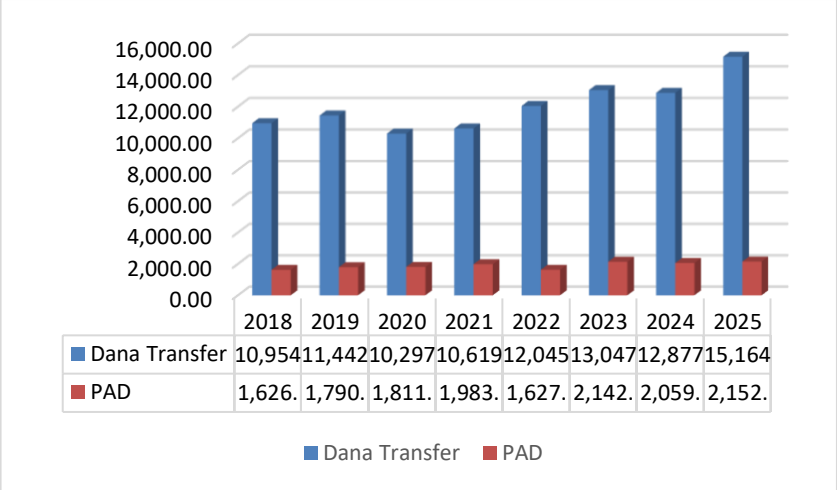
The General Allocation Fund (DAK) is part of the Regional Allocation Fund (TKD) allocated with the aim of reducing disparities in financial capacity and public services between

regions. The Revenue Sharing Fund (DAK) is part of the TKD allocated based on a percentage of certain revenues in the APBN and certain performance, primarily to producing regions, with the aim of reducing fiscal inequality and addressing negative externalities and increasing equity. Meanwhile, the Special Allocation Fund (DAK) consists of Physical DAK, Non-Physical DAK, and grants to regions directed to support funding for specific needs or priorities in the region (Government Regulation of the Republic of Indonesia Number 37 of 2023) .

Although transfer funds play a significant role in reducing fiscal capacity disparities between regions, the implementation of fiscal decentralization in Indonesia still faces challenges in the form of high dependence of regional governments on central government transfers (Madakarah & Makaliwe, 2023) . This level of dependence is generally related to the limited capacity of regions to generate their own revenue. Hirawan (2006) explains that balancing funds account for a large portion of the regional budget (APBD) structure, particularly for district/city governments. This situation indicates that regional governments' ability to explore potential local revenue sources is still suboptimal (Pabayo, 2025) .

This fiscal dependency phenomenon is also evident in district/city governments in West Nusa Tenggara Province. Based on data from the Directorate General of Fiscal Balance, central government transfer funds received by district/city governments in West Nusa Tenggara Province during the 2018–2025 period ranged from IDR 10,297.76 billion to IDR 15,164.21 billion . Meanwhile, Regional Original Income (PAD) during the same period ranged from IDR 1,626.36 billion to IDR 2,152.92 billion . This difference indicates that district/city government revenues in West Nusa Tenggara Province derived from central government transfer funds are much greater than PAD (Directorate General of Fiscal Balance, 2026) .

Figure 1. Comparison of District/City Government Transfer Funds and Original Regional Income of West Nusa Tenggara Province 2018–2025



Source: DJPK, Ministry of Finance (2026)

Based on Figure 1, central government transfer funds fluctuated during the 2018–2025 period. Transfer funds decreased from IDR 11,442.00 billion in 2019 to IDR 10,297.76 billion in 2020 , then increased again and reached a peak of IDR 15,164.21 billion in 2025. Meanwhile, PAD generally showed an increasing trend, although it decreased in 2022 and 2024 before increasing again to IDR 2,152.92 billion in 2025. Although PAD increased, its value was still

much lower than the transfer funds received by district/city governments in West Nusa Tenggara Province (Directorate General of Fiscal Balance, 2026) . This condition indicates that the region's ability to generate its own revenue is still much lower compared to revenues from central government transfers.

This situation indicates that local governments' ability to generate their own revenue sources still needs improvement. High dependence on transfer funds has the potential to reduce local governments' incentives to optimize local revenue sources if transfers are not accompanied by strengthening fiscal capacity and regional revenue governance (Pabayo, 2025). ;OECD, 2021) . In fact, one of the main objectives of fiscal decentralization is to encourage regional governments to have stronger and more independent fiscal capacity in financing the implementation of government and regional development (Oates, 1999) .

One important indicator in assessing regional fiscal independence is the ability of local governments to increase regional tax revenues. Based on Law No. 28 of 2007, taxes are mandatory contributions from citizens, both individuals and companies, to the state that are legally enforceable without any direct compensation (Muhamad Bai'ul Hak, 2023) . At the local level, local taxes play an important role as one of the main sources of local revenue (*own-source revenue*) which is managed to finance development and improve community welfare . The OECD emphasizes the importance of strengthening the fiscal capacity of subnational governments through increasing own revenues, equitable transfers, and strengthening proportional spending authority (OECD, 2021a) . Taxes are also the main source of local government own revenue in many countries, so increasing local tax revenue is an important part of strengthening the fiscal capacity of subnational governments (Dharma, 2025) .

Regional tax revenue plays a strategic role because it reflects the ability of local governments to finance public services and development without excessive reliance on central government transfers. Subnational governments with a stronger revenue base tend to have greater accountability incentives in public service provision and regional fiscal management (OECD, 2021) . Therefore, regional tax revenue can be used as an indicator of regional tax mobilization and the level of fiscal independence of local governments.

The relationship between central government transfer funds and regional tax revenues can result in two possible responses. First, transfers can create *a crowding-out effect* , where high transfer funds reduce the incentive for regional governments to explore and increase regional tax revenues. Under these conditions, regional governments tend to rely on transfers from the central government as their primary source of funding, resulting in suboptimal efforts to increase the tax base, tax administration, oversight, and taxpayer compliance (Tradinatama & Solikin, 2023) .

Second, transfer funds can create *a crowding-in effect* , where transfers actually strengthen local governments' ability to increase local tax revenue. Transfers can support administrative capacity, public services, oversight, and tax enforcement, ultimately increasing local tax mobilization. Thus, transfers do not necessarily undermine local tax collection efforts; they can also be a supporting instrument for increasing local tax revenue.

Previous research has shown that the relationship between central government transfers and local tax revenue or collection efforts has not yielded consistent results. Internationally, Masaki (2018) used quarterly local fiscal data in Tanzania to analyze the effect of intergovernmental transfers on local revenue mobilization. The results showed that intergovernmental transfers had a positive effect on local revenue, indicating a *crowding-in*

effect . These findings suggest that central government transfers do not always reduce local government efforts to increase revenue, but can support local governments' ability to mobilize revenue.

In the Indonesian context, Aida and Hariyanti (2023) used *unbalanced panel data* covering districts/cities in Indonesia for the 2015–2019 period to analyze the influence of DAU, DAK, and DBH on *tax effort* . The results showed that DAU and DAK had a negative effect on *tax effort* , while DBH had a positive and significant effect. Thus, DAU and DAK tended to exhibit *a crowding-out effect* , while DBH exhibited *a crowding-in effect* .

In contrast to the aforementioned study, Noviyanti (2022) used panel data covering 31 provinces and 372 regencies/cities in Indonesia during the 2005–2019 period. The study employed a *random effects approach* at the provincial level and *a fixed effects* approach at the district/city level. The results at the district/city level showed that the General Allocation Fund (DAU) had a positive and significant effect on regional tax collection efforts, while the Special Allocation Fund (DAK) and Revenue Sharing Fund (DBH) had no significant effect. These results indicate that the General Allocation Fund (DAU) tends to lead to *a crowding-in effect* , in contrast to the findings of Aida, Hariyanti, and Sumiyanti (2022).

Furthermore, Saptono and Mahmud (2023) used dynamic panel data on district/city governments in Indonesia using the *Dynamic Panel approach* and *the System-Generalized Method of Moments* (System-GMM). The study showed that aggregate central government transfers and the General Allocation Fund (DAU) had *a crowding-in effect* on regional tax revenues, while the Regional Allocation Fund (DBH) and Special Allocation Fund (DAK) had no significant effect. Meanwhile, Tradinatama & Solikin (2023) used panel data on district/city governments in Indonesia during the 2014–2017 period using the Fixed Effect Model (FEM) approach. The results showed that the General Allocation Fund (DAU) had a negative effect on regional tax revenues, the Regional Allocation Fund (DBH) had a positive effect, while the Special Allocation Fund (DAK) had no significant effect. Thus, the General Allocation Fund (DAU) exhibited *a crowding-out effect* , while the Regional Allocation Fund (DBH) exhibited *a crowding-in effect* .

The differences in research results indicate that the relationship between central government transfers and regional tax revenues has not yet yielded consistent empirical conclusions. These differences may be influenced by the characteristics of each transfer type, regional economic conditions, fiscal capacity, the quality of regional governance, and the ability of regional governments to mobilize local tax potential. While the general DAU (General Allocation Fund) can provide fiscal space to improve administrative capacity and public services, it can also reduce incentives for tax collection if regional governments become overly dependent on transfers. The DBH (Regional Revenue Sharing Fund) can have different impacts due to its relationship to the characteristics of regional revenues and the resources available to the region. Meanwhile, the DAK, with its more specific uses, may not directly increase regional tax revenues.

Previous studies have focused more on the impact of transfer funds on local revenue (PAD), regional spending, economic growth, regional financial performance, and the *flypaper effect* . Research specifically examining the General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH) on regional tax revenue as indicators of regional tax mobilization is still relatively limited. Furthermore, Saptono and Mahmud's (2023) study used aggregate data from districts/cities in Indonesia, while

Tradinatama and Solikin (2023) used data from districts/cities in Indonesia for the 2014–2017 period. These differences in regional coverage and timeframes indicate that empirical evidence regarding the relationship between the General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH) and regional tax revenue in district/city governments in West Nusa Tenggara Province remains limited.

This limited empirical evidence underpins the selection of West Nusa Tenggara Province as the research area. NTB was chosen because its regencies/cities still exhibit revenues dominated by central government transfers, while local revenue (PAD) remains at a much lower level. This situation is important to examine because the magnitude of transfers can offer two possibilities: either encouraging local governments to increase fiscal capacity (*crowding-in*) or reducing local governments' incentives to optimize tax revenue (*crowding-out*). Thus, NTB serves as a relevant context for examining how each type of transfer relates to local tax revenue.

This study uses data from 10 regencies/cities in West Nusa Tenggara Province for the period 2018–2025. This period covers observations before and after the enactment of Law of the Republic of Indonesia Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments (HKPD Law). Therefore, this study is expected to provide empirical evidence regarding the influence of DAU, DAK, and DBH on regional tax revenues during the transition period of changes in central-regional financial relations policies.

Based on the existing phenomena and gaps, this study analyzes the influence of the General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH) on regional tax revenues in district/city governments in West Nusa Tenggara Province from 2018 to 2025. This study also identifies the tendency of *crowding-in* or *crowding-out effects* of each type of transfer fund on regional tax revenues. The selection of the 2018–2025 period is expected to provide an overview of the relationship between transfers and regional taxes in a period that includes conditions before, during, and after the pandemic, as well as the initial period of implementation of the Regional Tax Law.

METHOD

This study uses a quantitative method with an explanatory *research approach* to analyze the effect of the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH) on regional tax revenues. The analysis was conducted using panel data regression because the research data incorporates differences between regions and changes over time. The research location covers all district and city governments in West Nusa Tenggara Province, namely eight districts and two cities, with a research period of 2018–2025. The data used are secondary data in the form of panel data consisting of *cross-section data* in the form of 10 districts/cities and *time series data* for eight years, with a maximum number of observations of 80 observations. The research data includes the realization of regional tax revenues, DAU, DAK, and DBH in each district/city. Data sources come from the Directorate General of Fiscal Balance of the Ministry of Finance of the Republic of Indonesia, the Central Statistics Agency of West Nusa Tenggara Province, and the Budget Realization Report of district/city governments. Data collection was conducted through documentation and literature review methods by collecting, recording, classifying, and processing data from the DJPK

Regional Budget Data Portal. Literature review was conducted by reviewing books, journal articles, laws and regulations, and official documents relevant to fiscal federalism, fiscal decentralization, intergovernmental transfers, and regional tax revenues.

The dependent variable in this study is regional tax revenue, measured using the realized value of regional taxes received by each district/city government in each research year. This variable was chosen because it reflects the ability of regional governments to collect one of the main sources of Regional Original Income (PAD) and demonstrates the region's capacity to optimize revenue sources derived from its own authority. The independent variables consist of the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH), each of which is measured based on the realized value of revenue in each district/city and the research year. All variables are expressed in units of billion rupiah and use the realized value to reflect the funds actually received or obtained by the regional government.

Data analysis was performed using panel data regression. Prior to estimation, the data was organized by district/city identity and observation year. Then, it was checked for completeness, unit consistency, and the correspondence between the realized values for each variable. The panel data regression model in this study is formulated as follows:

$$\text{Tax}_{it} = \alpha + \beta_1 \text{DBH}_{it} + \beta_2 \text{DAU}_{it} + \beta_3 \text{DAK}_{it} + \varepsilon_{it}$$

Information:

Y = Realization of regional tax revenue
α = Constant
β_1 = Regression coefficient for X_1
β_2 = Regression coefficient for X_2
β_3 = Regression coefficient for X_3
X_1 = Revenue Sharing Fund (DBH)
X_2 = General Allocation Fund (DAU)
X_3 = Special Allocation Fund (DAK)
e = Prediction error
i = 10 districts/cities in West Nusa Tenggara Province
t = Research period, namely 2018–2025

To determine the most appropriate estimation model between *the Common Effect Model* (CEM), *Fixed Effect Model* (FEM), and *Random Effect Model* (REM), the Chow Test, Hausman Test, and *Lagrange Multiplier* (LM) Test were conducted. The Chow Test developed by Gregory C. Chow (1960) was used to determine the choice between CEM and FEM by looking at whether there was a difference in intercepts between regions. If *the Cross-section Chi-square probability value* was <0.05, then FEM was chosen, whereas if >0.05, then CEM was chosen. Furthermore, the Hausman Test developed by Jerry A. Husman (1978) was used to determine the choice between FEM and REM by looking at the relationship between individual effects and independent variables. If *the Cross-section Random* probability value was <0.05, then FEM was chosen, whereas if >0.05, then REM was chosen. If the Chow Test results indicate CEM,

then *the Lagrange Multiplier* (LM) Test developed by Breusch and Pagan (1980) is performed to determine the choice between CEM and REM by examining the presence of random effects in the model. If *the Breusch-Pagan* probability value is <0.05, then REM is selected, whereas if >0.05, then CEM is selected. The selection of these three tests was carried out because each model has different characteristics in treating differences between regions and time. The selected model is then used to test the research hypothesis.

After the best estimation model is obtained, classical assumption tests are performed, including multicollinearity, heteroscedasticity, and autocorrelation tests. Multicollinearity tests are used to determine whether there is a strong relationship between independent variables and can be seen through the *Tolerance* and *Variance Inflation Factor* (VIF) values. Heteroscedasticity tests are used to determine whether there is inequality in residual variance from one observation to another , while autocorrelation tests are used to determine whether there is a relationship between residuals in different periods. The Durbin-Watson test was developed by James Durbin and Geoffrey S. Watson (1950). used as a method to detect autocorrelation. If an autocorrelation problem is found, the model can be adjusted using the Autoregressive Order One (AR(1)) component to accommodate first-order serial correlation. (Powell, nd) . In this study, the initial model showed positive autocorrelation so that re-estimation was carried out by adding an AR(1) component.

The next step is to test the hypothesis using a partial test or *t -test* , a simultaneous test or *F -test* , and the coefficient of determination (R^2). The t-test, developed based on the t-distribution by Student (1908), is used to determine the effect of each independent variable on the dependent variable. The F-test, developed by Ronald A. Fisher (1925), used to determine the effect of DAU, DAK, and DBH together on regional tax revenue. Furthermore, the coefficient of determination (R^2) is used to measure the ability of DAU, DAK, and DBH to explain variations in regional tax revenue in district/city governments in West Nusa Tenggara Province. (Cameron & Windmeijer, 1995) .

RESULTS AND DISCUSSION

Results (Statistics Result) Estimation of the Chow and Hausman test regression model:

Chow Test (*CEM vs FEM*)

Table 1. Chow Test Results

Testing (*Effects Test*)	Statistics	Prob.	Selected Model
Cross-section F	19,784	0,000	FEM
Cross-section Chi-square	103,744	0,000	FEM

Source: Processed Secondary Data

In the Chow Test, the Cross-section F value was obtained at 19.784 with a probability of 0.000. The value of 19.784 is the F statistic used to determine the model between the Common Effect Model and the Fixed Effect Model, while the probability of 0.000 indicates the level of significance of the test. Because the probability of 0.000 is smaller than 0.05, the Fixed Effect Model is more appropriate to use than the Common Effect Model. In addition, the Cross-section Chi-square value of 103.744 with a probability of 0.000 also provides the same result, which supports the selection of the Fixed Effect Model.

Hausman Test (*FEM vs REM*)

Table 2. Hauasman Test Results

Test Summary	Chi-Square Statistic	Chi-Square df	Prob.	Selected Model
Random cross-section	8,486	3	0.037	FEM

Source: Processed Secondary Data

The Hausman test yielded a Chi-Square Statistic of 8.486 with a degree of freedom of 3 and a probability of 0.037. The Chi-Square statistic of 8.486 is used to determine the more appropriate model between the Fixed Effect Model and the Random Effect Model. The number 3 represents the degree of freedom in the test, while the probability of 0.037 indicates the level of significance of the test results. Because the probability of 0.0370 is smaller than 0.05, the Fixed Effect Model is more appropriate than the Random Effect Model.

Regression Model

Table 3. Regression Model Results (Fixed Effects Tests)

Variables	Coefficient	Standard Error	Prob.	Note:
Constant	-143,178	34,186	0.000	
DBH	0.039	0.029	0.189	Not Significant
DAU	0.306	0.043	0.000	Significant
DAK	-0.031	0.070	0.662	Not Significant

Source: Processed Secondary Data

Based on table 3, the following regression equation is obtained:

$\hat{Y} = -143.178 + 0.039X1 + 0.306X2 - 0.031X3$

1. for the Revenue Sharing Fund (X1) variable is 0.039. This value indicates that DBH has a positive relationship with Regional Taxes. This means that every Rp1 billion increase in DBH is estimated to be followed by an increase in Regional Taxes of Rp0.039 billion, assuming other variables remain constant. Furthermore, the standard error of 0.029 indicates the level of uncertainty in the DBH coefficient estimate. Meanwhile, the probability of 0.189 (> 0.05) indicates that the effect of DBH on regional tax revenue is not statistically significant. Thus, DBH has not been proven to have a significant effect on regional tax revenue.
2. The General Allocation Fund (X2) variable has a coefficient value of 0.306. This value indicates that the General Allocation Fund (DAU) has a positive relationship with Regional Taxes. This means that every Rp1 billion increase in the DAU is estimated to be followed by an increase in Regional Taxes of Rp0.306 billion, assuming other variables remain constant. The standard error of 0.043 indicates the level of uncertainty in the DAU coefficient estimate, while the probability is 0.0000 (<0.05), so the effect of the DAU on regional tax revenue is statistically significant . Thus, the DAU is proven to have a positive and significant effect on Regional Taxes.
3. The Special Allocation Fund (X3) variable has a coefficient value of -0.031. The negative sign indicates that DAK has a negative relationship with Regional Taxes. This means that every Rp1 billion increase in DAK is estimated to be followed by a decrease in Regional Taxes of Rp0.031 billion, assuming other variables remain constant. The standard error of 0.070 indicates the level of uncertainty in the DAK coefficient estimate, while the probability of 0.6620 (> 0.05) indicates that the effect of DAK is not

statistically significant because 0.662 is greater than 0.05. Thus, DAK is not proven to have a significant effect on regional tax revenue.

Hypothesis Testing

Partial hypothesis test (t-test)

Table 4. Results of the Percentage Test (t-Test)

Variable	Coefficient	t-statistic	Prob.	Note:
Constant	-143,178	-4.188	0.000	
DBH	0.039	1,326	0.189	Not Significant
DAU	0.306	7,040	0.000	Significant
DAK	-0.031	-0.439	0.662	Not Significant

Source: Processed Secondary Data

From the equation that can be seen in table 4, it can be interpreted as follows:

1. Influence Profit Sharing Fund variable (X1) against Regional Tax , because obtained The t-statistic value is 1.326 with a probability of 0.189. The value of 1.326 is t -statistic used For test the influence of DBH in general partial to Regional Tax . When compared with t- table of 1.992, the t-statistic value is 1.326 more small from the t- table 1.992 (1.326 < 1.992). These results are also strengthened with probability value of 0.189 which is higher big from level significance of 0.05. With Thus , DBH in general partial No influential significant to Regional Taxes in West Nusa Tenggara Province . Although DBH coefficient is worth positive of 0.039, which indicates a tendency *crowding in* **,** influence the Not yet proven in a way empirical Because No significant .
2. Influence Allocation Fund variable General (X2) against Regional Tax , because obtained The t-statistic value is 7.040 with a probability of 0.000. The value of 7.040 is t -statistic used For test the influence of DAU in general partial to Regional Tax . When compared with t- table of 1.992, the t-statistic value is more than 7.040 big from the t-table 1.992 (7.040 > 1.992). These results are also strengthened with probability value of 0.000 which is more small from level significance of 0.05. With Thus , DAU is partial influential significant to Regional Taxes in West Nusa Tenggara Province . The DAU coefficient is valued at positive of 0.306 indicates that the influence of DAU on Regional Taxes are of a nature positive and leads to phenomena *crowding in* **,** namely an increase in DAU is followed by an increase Regional Tax . With Thus , DAU is proven capable push improvement reception Regional Taxes in West Nusa Tenggara Province .
3. Influence Allocation Fund variable Special (X3) against Regional Tax (Y), because obtained obtained The t-statistic value is -0.439 with a probability of 0.662. The value of -0.439 is t -statistic used For test the influence of DAK in general partial to Regional Tax . In compare t-statistic value with t- table , used mark absolute value , so that |-0.439| = 0.439. This value more small from t- table of 1.992 (0.439 < 1.992). These results are also strengthened with probability value of 0.662 which is higher big from level significance of 0.05. With Thus , DAK is partial No influential significant to Regional Taxes in West Nusa Tenggara Province . The DAK coefficient is worth negative of -0.031 leads to a tendency *crowding out* **,** namely DAK increases tend to

followed by a decline Regional Tax . However , because the result No significant , phenomenon *crowding out* the Not yet proven in a way empirical.

Hypothesis Testing Simultaneous (F Test)

Table 5. Simultaneous Test Results (F Test)

R-squared	0.763683
Adjusted R-squared	0.721358
SE of regression	36.51879
Sum squared residual	89352.67
Log likelihood	-394.2479
F-statistic	18.04315
Prob(F-statistic)	0.000000

Source: Processed Secondary Data

Based on the results of the Simultaneous Test (F Test) in Table 5, the F-statistic value is 18.04315 with a probability of 0.000000. The F-statistic value is the F statistic used to test whether the DBH, DAU, and DAK variables jointly affect Regional Taxes, while the probability of 0.000000 indicates the level of significance of the test results. The calculated F-value of 18.043 is greater than the F-table of 2.725 (18.043 > 2.725), and the probability value of 0.000000 is smaller than the significance level of 0.05. Thus, it can be concluded that DBH, DAU, and DAK jointly have a significant effect on Regional Taxes.

Classical Assumption Test:
Multicollinearity Test

Table 6. Multicollinearity Test Results

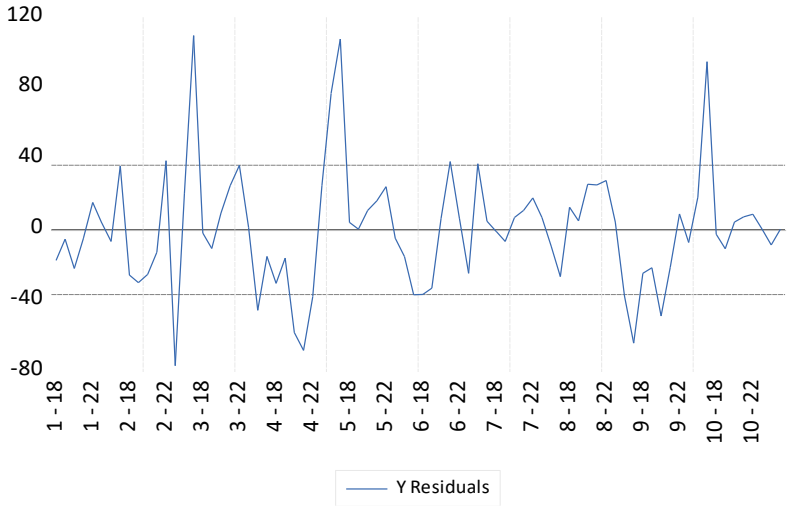
Model	Tolerance	VIF
DBH	0.984	1,017
DAU	0.825	1,213
DAK	0.836	1,196

Source: Processed Secondary Data

Based on the results of the multicollinearity test, the DBH variable obtained a tolerance value of 0.984 and a VIF of 1.017. The tolerance value is used to see whether there is a too strong relationship between independent variables, while the VIF is used to see the level of multicollinearity. Because the tolerance of 0.984 is greater than 0.10 and the VIF of 1.017 is less than 10, the DBH does not experience multicollinearity problems. In the DAU variable, the tolerance value is 0.825 and the VIF is 1.213. Because the tolerance value of 0.825 is greater than 0.10 and the VIF of 1.213 is less than 10, the DAU variable does not experience multicollinearity problems. And in the DAK variable, the tolerance value is 0.836 and the VIF is 1.196. Because the tolerance value of 0.836 is greater than 0.10 and the VIF of 1.196 is less than 10, the DAK variable also does not experience multicollinearity problems.

Heteroscedasticity Test

Table 7. Heteroscedasticity Test Results



Source: Processed Secondary Data

Based on the results of the heteroscedasticity test using the residual graph, it can be seen that all residual values fall within the upper limit of 500 and the lower limit of -500. No residuals exceed these two limits. This condition indicates that the residual distribution is within a relatively stable range and does not show any systematic changes in residual variance. Thus, the residual variance can be considered relatively constant or homoscedastic, so the research model does not experience symptoms of heteroscedasticity and can be declared to pass the heteroscedasticity test.

Autocorrelation Test

Based on the results of the Durbin-Watson test on the initial model, the Durbin-Watson value was obtained at 0.983 , which is smaller than the critical value of dL of 1.560 , thus indicating the presence of positive autocorrelation . To overcome this problem, the model was then re-estimated by adding an AR(1) component to accommodate the first-order serial correlation. After AR(1) correction, the Durbin-Watson value increased to 2.089 . This value is in the area where there is no autocorrelation, namely dU < DW < 4 – dU or 1.715 < 2.089 < 2.285 . Thus, based on the Durbin-Watson criteria, the model after AR(1) correction does not show any autocorrelation.

Determinant Coefficient Test (R^2)

Table 5 shows that the R-squared value is 0.76368 or 76.37% . The coefficient of determination value indicates that the independent variables, namely the Revenue Sharing Fund (DBH), General Allocation Fund (DAU), and Special Allocation Fund (DAK) , are able to

explain the variability of the dependent variable, namely Regional Taxes, by 76.37% . Meanwhile, the remaining 23.63% is explained by other factors or variables not included in this regression model.

Discussion

The Influence of Revenue Sharing Funds (DBH) on Regional Tax Revenue

The Revenue Sharing Fund (DBH) has a coefficient of 0.039 with a t-count value of 1.326 , smaller than the t -table value of 1.992, and a probability value of 0.189, which is greater than 0.05. These results indicate that DBH has a positive but insignificant effect on regional tax revenue. Descriptively, the positive coefficient indicates that every Rp1 billion increase in DBH tends to be followed by an increase in regional tax revenue of Rp0.039 billion or Rp39 million. However, because this effect is not statistically significant, the increase in DBH has not been proven to consistently drive an increase in regional tax revenue. DBH is one component of Transfers to Regions (TKD) allocated based on a certain percentage of state revenue to producing regions and other regions within a region. The DBH allocation aims to reduce fiscal disparities between the central government and regional governments and increase the equality of financial capacity between regions. (Law (UU) Number 1 of 2022 , 2022) . Theoretically, additional DBH can strengthen the fiscal capacity of local governments in financing the implementation of government and public services. However, increasing DBH does not automatically guarantee an increase in local tax revenue because the effectiveness of its use is highly dependent on the priorities and budget management policies of local governments .

These results align with Noviyanti (2022), who found that DBH had no significant effect on regional tax collection efforts at the district/city level. Conversely, the results of this study differ from those of Aida and Hariyanti (2023) and Tradinatama and Solikin (2023), who found that DBH had a positive and significant effect on regional taxes. These differences in results may be due to differences in regional coverage, observation periods, regional fiscal characteristics, and differences in the dependent variables used, particularly regional tax revenue. A positive DBH coefficient indicates a tendency for a unidirectional relationship between DBH and regional tax revenue, which theoretically could lead to a *crowding-in mechanism* . This means that increasing revenue-sharing fund transfers has the potential to encourage regional governments to further optimize their regional tax potential. However, because the probability value is greater than 0.05, this study has not found strong statistical evidence to suggest that DBH significantly causes *a crowding-in effect* on regional tax revenue. Therefore, the hypothesis of DBH's influence on regional tax revenue is rejected.

Influence of General Allocation Fund (DAU) to Regional Tax Revenue

The General Allocation Fund (DAU) has a coefficient of 0.306 with a t – count value of 7.040, greater than the t-table value of 1.992 , and a probability value of 0.000 which is smaller than 0.05. This positive coefficient indicates that every increase in DAU of IDR 1 billion is estimated to be followed by an increase in regional tax revenue of IDR 0.306 billion or IDR 306 million. Thus, DAU has a positive and significant effect on regional tax revenue in districts/cities in West Nusa Tenggara Province during the study period. This positive effect can be explained because DAU is a general transfer fund allocated to reduce disparities in financial capacity and public services between regions, thereby expanding the fiscal space of regional governments (Law (UU) Number 1 of 2022 , 2022) . As *a block grant* , the General

Allocation Fund (DAU) authorizes regional governments to allocate funds according to regional priorities and needs, including supporting governance, public services, tax administration, and regional revenue management (Ministry of Finance, 2023) . Adequate DAU availability can strengthen the institutional and fiscal capacity of regional governments, thereby indirectly supporting the intensification and expansion of regional tax revenues.

Empirically, these results align with Noviyanti (2022), who found that the General Allocation Fund (DAU) had a positive and significant effect on regional tax collection efforts at the district/city level. These results also align with Saptono and Mahmud (2023), who found that the General Allocation Fund (DAU) had a *crowding-in effect* on regional tax revenue, meaning that increased transfers did not weaken, but instead encouraged, regional government efforts to increase tax revenue. However, these results differ from those of Aida and Hariyanti (2023) and Tradinatama and Solikin (2023), who found that the General Allocation Fund (DAU) had a negative effect on regional tax revenue. These differences in findings may be due to differences in regional coverage, observation periods, regional fiscal characteristics, and differences in the dependent variables used, particularly among regional tax revenues. Based on these research results, the General Allocation Fund (DAU) exhibits a *crowding-in pattern* on regional tax revenues, as increases in the General Allocation Fund (DAU) were significantly followed by increases in regional tax revenues. These findings confirm that the General Allocation Fund (DAU) does not always create a fiscal disincentive effect but can serve as a stimulus that strengthens the capacity of regional governments to optimize potential regional tax revenues.

The Impact of Special Allocation Funds (DAK) on Regional Tax Revenue

Allocation Fund Special (DAK) has coefficient of -0.031 with mark tt t – count of -0.439. Absolute value tt t – count by 0.439 more small than mark tt t -table of 1.992, and the value probability by 0.662 more big than 0.05. The results show that DAK has direction connection negative but No significant to reception tax area . In terms of descriptive , coefficient negative the indicates that every increase in DAK by IDR 1 billion tend followed by a decline reception tax area amounting to Rp0.031 billion or Rp. 31 million . However , because influence the No significant in a way statistics , results This No can made into base For conclude that the increase in DAK is real cause decline reception tax area . Direction connection negative the can explained through characteristics of DAK as *specific grant* . DAK is part from Transfer to Allocated Areas For fund programs, activities , and/ or policy certain in accordance priority national as well as help operationalization service public , with the use that has been determined by the government (Law (UU) Number 1 of 2022 , 2022) . Characteristics the cause government area own room more allocation limited compared to DAU. As a result , additional DAK tends to used For financing priority programs national , such as infrastructure basic , service health , education , or other designated fields government , and not yet Of course directed For support activity intensification and extensification tax area (Ministry of Finance, 2022) .

With Thus , an increase in DAK does not automatically increase regional tax revenue. In this study, DAK even showed a negative relationship with regional tax revenue. This negative relationship theoretically could indicate a tendency towards *a crowding-out pattern* , namely a condition where an increase in central government transfers actually reduces the incentive for regional governments to optimize regional tax revenue. However, because the calculated t-

value is smaller than the t -table and the probability more big than 0.05, direction negative the No significant in a way statistics . Research results This in line with Noviyanti (2022) and Saptono and Mahmud (2023) found that that DAK does not influential significant to effort collection tax or reception tax area . This result is also in line with with Tradinatama and Solikin (2023) found that that DAK does not influential significant to reception tax area . Conformity the show that the influence of DAK on reception tax area tend weak Because characteristic its use is tied to programs and policies certain , so that No give flexibility fiscal equivalent with DAU in support administration and strengthening reception tax area.

The Simultaneous Effect of DBH, DAU, and DAK on Regional Tax Revenue

Based on the results of the simultaneous test (F test), the calculated F value was 18.043 , greater than the F table of 2.725 , with a probability value of 0.000 < 0.05 . These results indicate that DBH, DAU, and DAK together have a significant effect on regional tax revenues in district/city governments in West Nusa Tenggara Province. This simultaneous influence indicates that regional tax revenues are not only related to one type of transfer, but also to the combination of characteristics of each transfer. DBH provides additional fiscal capacity through a revenue-sharing mechanism, DAU provide more general fiscal space for local governments, while supporting the financing of certain activities according to their designation (Republic of Indonesia, 2022) . These three transfer sources collectively form the fiscal capacity of local governments, which can influence their ability to manage and increase regional tax revenues.

This is also supported by the R-squared value of 0.763683 , which indicates that approximately 76.37% of the variation in regional tax revenue can be explained by DBH, DAU, and DAK in the model , while the remaining 23.63% is explained by other factors outside the model. These other factors can include economic growth, investment, MSME development, tourism sector activities, population, and the effectiveness of tax administration and compliance . This indicates that central government transfers have an important role in supporting the fiscal capacity of district/city governments in West Nusa Tenggara Province . This is in line with the concept of *Fiscal Federalism Theory* which explains that intergovernmental transfers can be used to reduce fiscal capacity imbalances and support the ability of regional governments to provide public services. However, these transfers still need to be followed by regional government efforts to optimize their own revenue sources, especially regional taxes.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on results research , can concluded that dependence government districts / cities in West Nusa Tenggara Province regarding government transfer funds center Still become condition important in management finance area , while ability area in optimize reception tax as source income Alone Still need strengthened . Relationship between transfer funds and receipts tax area show that No all transfer type provides same response . Profit Sharing Funds have not been show real impact to reception tax region , while the Allocation Fund Special show trend *crowding out* , but Not yet proven in a way statistics . Meanwhile that , Allocation

Fund General capable push improvement reception tax area so that show existence trend *crowding in* , which means the transfer funds can utilized For strengthen capacity fiscal and support management reception area . In terms of overall , government transfer funds center still own role in support capacity fiscal area , however increased transfers are necessary followed with effort government district / city For optimize potential tax area for dependency to government center can reduced and independence fiscal area can reinforced.

Recommendation

Based on results research , government districts / cities in West Nusa Tenggara Province need optimize utilization of government transfer funds center in accordance with functions and provisions its use . In the Revenue Sharing Fund (DBH), the government area need optimize Utilization of Tax DBH and Source DBH Power Natural For support development programs and activities in accordance authority area , as well as increase management potential reception area . Recommendations This need noticed Because results study show that DBH has not yet influential significant to reception tax area . In the Allocation Fund General (DAU), government area need optimize its use For support service public , especially in the field of work general and services general in accordance with applicable provision . Improvement quality infrastructure and services public expected can support activity economy as well as push improvement reception tax area . Recommendations This in line with results research that shows that DAU has an influence positive and significant to reception tax area . Meanwhile that , in the Allocation Fund Special (DAK), government area need optimizing Physical DAK For development infrastructure in accordance designated fields and Non - Physical DAK For support service as well as activities that have been determined . The utilization of DAK is expected can increase quality facility public and support activity economy area , although results study show trend *crowding out* that has not yet proven significant in a way statistics . In terms of overall , the government area need ensure that appropriate use of DBH, DAU and DAK with its intended use as well as supported by efforts development potential tax regions for independence fiscal the more strong .

Besides optimize utilization of government transfer funds central government districts / cities in West Nusa Tenggara Province need push improvement reception tax area through development potential economy local , especially investment and business micro , small , and medium enterprises (MSMEs). Efforts the can done through simplification licensing business , improvement quality infrastructure supporters , development of MSMEs, as well as expansion access marketing and digitalization business . Improvement investment and development of MSMEs are expected can push activity economy area as well as expanding the tax base , especially in the sector trade , food and beverage , hospitality , and other services that become object tax area in accordance applicable provisions . Government the area also needs optimize potential sector tourist through development destination tourism , improvement quality facility supporters and promotions tour area For push growth activity potential economy increase reception tax area . Besides that , data updating is mandatory taxes and objects tax ,

strengthening supervision , as well as implementation system payment tax digitally necessary done For increase compliance and effectiveness collection tax . With Thus , the increase reception tax area No only depends on the utilization of DAU, DAK, and DBH, but also on the ability government area in push investment , developing MSMEs, and optimizing potential economy local use strengthen independence fiscal area.

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