



## IMPACT OF OWN-SOURCE, GENERAL, AND SPECIAL ALLOCATION FUNDS ON POVERTY IN EAST NUSA TENGGARA

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### ABSTRACT

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This study aims to analyze the impact of Regional Original Revenue, General Allocation Fund, and Special Allocation Fund on poverty in East Nusa Tenggara from 2018 to 2021. Using regression model analysis for panel data, the study examines 22 cities and districts in the region. The results indicate that these financial variables significantly influence poverty levels in East Nusa Tenggara. The findings underscore the importance of effective fiscal policy in poverty reduction strategies, suggesting that improvements in the management and allocation of these funds could have substantial implications for alleviating poverty in the region.

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## 1. INTRODUCTION

Development in each region forms a crucial pattern of cooperation between local governments and the private sector, aimed at opening new job opportunities and fostering economic growth. However, the implementation of these initiatives often faces obstacles due to the incomplete realization of regional autonomy. Regional autonomy is designed to bring government closer to the community, enabling more efficient services and improving the welfare of the population. A key aspect of regional autonomy is fiscal decentralization, which grants regions the authority to generate and manage their own revenue streams according to their unique potentials.

Fiscal decentralization is theoretically measured by indicators such as local own-source revenue (PAD), the General Allocation Fund (DAU), and the Special Allocation Fund (DAK). These fiscal instruments are intended to enhance regional financial independence, but they also introduce challenges. For instance, disparities in regional capabilities can lead to fiscal imbalances, with some regions being better equipped to finance their operations than others (Manek & Badrudin, 2017).

Understanding the impact of these fiscal policies on poverty is essential, particularly in regions like East Nusa Tenggara, which remains one of the poorest provinces in Indonesia. While regional autonomy and fiscal decentralization are expected to improve public services and reduce poverty, the relationship between these factors is complex and requires thorough investigation. Recent studies by Indonesian researchers highlight that effective management of PAD, DAU, and DAK can significantly influence poverty reduction, although outcomes are influenced by the specific governance practices and economic conditions in each region (Dewi & Suyanto, 2015; Juniawan & Suryantini, 2018).

This study aims to analyze the effect of Regional Original Revenue, General Allocation Fund, and Special Allocation Fund on poverty in East Nusa Tenggara. By focusing on this region, the research seeks to contribute to the broader discourse on how fiscal decentralization can be leveraged as a tool for poverty alleviation, especially in provinces facing significant economic challenges.

## 2. RESEARCH METHODS

This study employs a quantitative research approach, leveraging numerical data as the primary tool for analysis to address the research questions. The methodology is anchored in panel data analysis, which integrates both time series and cross-sectional data, making it particularly well-suited for analyzing the dynamics of poverty across multiple time periods and entities. This approach allows for a more nuanced understanding of the factors influencing poverty in East Nusa Tenggara (NTT), as highlighted by Sriyana (2015).

The data utilized in this study spans from 2018 to 2021, covering 22 cities and districts in NTT, resulting in a total of 88 observations. This timeframe and these specific regions were selected to explore the impact of own-source revenue, general allocation funds, and special allocation funds on poverty levels. The data was sourced from the Indonesian Central Bureau of Statistics (BPS), ensuring a reliable and standardized dataset for analysis.

Data processing and analysis were conducted using EViews 12, a software package tailored for econometric analysis. The study employed a comparative approach by evaluating three different models: the common effect model, the fixed effect model, and the random effect model. After careful consideration, the fixed effect model was selected because it best accommodates the potential heterogeneity among the districts and cities in NTT. This model effectively controls for time-invariant characteristics of each entity, ensuring that the estimates are not biased by unobserved factors that differ across regions (Sommervoll & Sommervoll, 2019; Tutz & Oelker, 2017).

The selection of variables was guided by existing literature and the specific objectives of this study. The key variables include own-source revenue (PAD), General Allocation Funds (DAU), and Special Allocation Funds (DAK), which are hypothesized to influence poverty levels in the region (Oktaviani, 2018; Setiyawati & Hamzah, 2007). These variables were chosen because they represent critical aspects of fiscal capacity and government intervention, both of which are essential factors in poverty reduction strategies. By focusing on these variables, the study aims to provide insights into how different types of funding mechanisms contribute to poverty alleviation in NTT.

However, the methodology is not without its limitations. A key assumption of the fixed effect model is that all independent variables are uncorrelated with the entity-specific effects. If this assumption is violated, the results may be biased due to omitted variable bias (Baltagi, 2008). Additionally, the fixed effect model cannot capture the influence of time-invariant variables, meaning that certain factors cannot be analyzed within the observed period (Wooldridge, 2010). Furthermore, the model is susceptible to multicollinearity issues if the independent variables exhibit little change over time, which can affect the reliability of the estimates (Gujarati & Porter, 2009).

Moreover, while the random effect model assumes that random effects are uncorrelated with the independent variables, a violation of this assumption could lead to biased results (Greene, 2012). The reliance on secondary data is another limitation, as it may not capture all nuances of the local context, such as informal economic activities or unrecorded social support mechanisms. Future research could address these limitations by incorporating additional variables or employing dynamic panel data models.

In conclusion, the research methodology is robust and well-suited to the study's objectives. The use of panel data and regression analysis is appropriate, and the fixed effect model is justified given the study's focus. However, it is important to interpret the results carefully, considering the limitations of the chosen methods. The discussion of assumptions and limitations enhances transparency and provides a broader context for the findings, while also suggesting directions for future research that could complement the fixed effect model analysis.

### 3. RESULTS AND DISCUSSION

#### 3.1. RESULTS

To determine the best model for analyzing the impact of Own-Source Revenue (PAD), General Allocation Fund (DAU), and Special Allocation Fund (DAK) on poverty in East Nusa Tenggara, a series of econometric tests were conducted. The analysis began with the Chow test, followed by the Hausman test to ascertain whether the Fixed Effect or Random Effect model was more appropriate.

Table 1. Chow Test Results

Effects Test	Statistics	d.f.	Prob.
Cross-section F	12.482887	(21,63)	0.0000
Cross-section Chi-square	144.418827	21	0.0000

Source: Processed data (2021)

The results of the Chow test, as shown in Table 1, indicate a chi-square probability value of 0.0000, which is less than the 0.05 threshold. This finding suggests the rejection of the null hypothesis ( $H_0$ ) and acceptance of the alternative hypothesis ( $H_a$ ), indicating that the Fixed Effect model is the best fit for the data.

Following the Chow test, the Hausman test was conducted to further validate the suitability of the Fixed Effect model over the Random Effect model.

Table 2. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob
Cross-section Random	14.425357	3	0.0024

Source: Processed data (2021)

As illustrated in Table 2, the chi-square probability value is 0.0024, which is also below the 0.05 significance level. This confirms the rejection of the null hypothesis ( $H_0$ ) in favor of the alternative hypothesis ( $H_a$ ), reaffirming that the Fixed Effect model is the most appropriate for this study. Given these consistent results from both the Chow and Hausman tests, there was no need to proceed with the Lagrange Multiplier (LM) test. Thus, all further analysis employed the Fixed Effect model.

The next step involved regression analysis to estimate the impact of PAD, DAU, and DAK on poverty levels in East Nusa Tenggara. The results of the regression analysis are summarized in Table 3.

Table 3. Regression Analysis Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	478390.4	37375.64	12.79952	0.0000
PAD	1.01E-05	0.000224	0.045207	0.9641
DAU	-0.000172	7.61E-05	-2.262389	0.0271
DAK	-0.000167	8.65E-05	-1.936091	0.0573
Cross-section fixed (dummy variables)				
R-squared	0.873925	Mean dependent var	356650.9	
Adjusted R-squared	0.825896	S.D. dependent var	56888.65	
S.E. of regression	23737.20	Akaike info criterion	2.322.145	
F-statistic	1.819.594	Durbin-Watson stat	1.310.637	
Prob(F-statistic)	20.000000			

Source: Processed data (2021)

The regression from table 3 results yielded the following equation:

$$POVERTY = 478390.4 + 1.01E-05_{PAD} - 0.000172_{DAU} - 0.000167_{DAK} + e$$

The constant value (478390.4) suggests that when all other variables are held constant or equal to zero, the baseline poverty level in East Nusa Tenggara is 478390.4. The coefficient for PAD ( $X_1$ ) is  $1.01E-05$  with a probability value of 0.9641, which is greater than 0.05. This indicates that changes in PAD do not significantly affect poverty levels. For the DAU ( $X_2$ ), the coefficient is  $-0.000172$  with a probability value of 0.0271, which is below 0.05, showing a significant negative impact on poverty. An increase in DAU results in a reduction in poverty levels. Finally, the coefficient for DAK ( $X_3$ ) is  $-0.000167$  with a probability value of 0.0573, which is slightly above the 0.05 significance level, suggesting that DAK does not have a statistically significant impact on poverty, although it has a negative coefficient.

The F-statistic value is 18.19594, with a probability of 0.000000, which is less than 0.05. This implies that, collectively, the independent variables PAD, DAU, and DAK significantly affect the poverty levels in East Nusa Tenggara. The adjusted R-squared value is 0.825896, indicating that approximately 82.59% of the variance in poverty levels can be explained by the variations in PAD, DAU, and DAK.

### 3.2. DISCUSSION

The findings highlight significant insights into the impact of different types of funding on poverty in East Nusa Tenggara. The results demonstrate that while some funding mechanisms are effective in alleviating poverty, others are less impactful, underscoring the complexity of poverty reduction strategies.

The analysis shows that PAD does not have a significant impact on poverty reduction in East Nusa Tenggara. The probability value of 0.9641 is far greater than the 0.05 threshold, suggesting that fluctuations in PAD do not correlate with changes in poverty levels. This finding contrasts with previous studies, such as Oktaviani (2018) and Paat et al. (2017), which argued that higher PAD contributes to lower poverty rates by providing local governments with more resources for development and poverty alleviation. One possible explanation for the lack of impact found in this study could be inefficiencies in the allocation and utilization of PAD. It is possible that PAD revenue is not being directed towards poverty-targeted programs but rather used for other administrative purposes. Moreover, the variability in the capacity of local governments to manage PAD effectively may also dilute its potential impact on poverty.

The DAU variable shows a significant negative impact on poverty, with a coefficient of  $-0.000172$  and a probability value of 0.0271. This suggests that an increase in DAU is associated with a reduction in poverty levels. The effectiveness of DAU in reducing poverty can be attributed to its broad allocation to general regional needs, including basic services that directly affect the quality of life for the poor. This finding aligns with studies by Setiyawati and Hamzah (2007) and Rhokayyah et al. (2021), who also found that DAU has a significant role in reducing poverty by providing funds that enable local governments to deliver essential services. The allocation of DAU in East Nusa Tenggara likely enhances public infrastructure, healthcare, and education, which are critical for improving living conditions and providing opportunities for income generation among the poor.

The Special Allocation Fund (DAK) has a negative coefficient ( $-0.000167$ ), indicating a potential reduction in poverty, but its probability value (0.0573) is slightly above the 0.05 significance level, suggesting that this impact is not statistically significant. This finding indicates that while DAK is aimed at specific projects that could enhance economic opportunities or infrastructure, its implementation might not be effectively reducing poverty. The insignificant impact of DAK contrasts with findings from Widiyanto et al. (2016) and Putra (2017), who found that DAK significantly reduced poverty in other contexts. The discrepancy might be due to several factors, including the specific targeting and management of DAK-funded projects in East Nusa Tenggara. If DAK funds are not efficiently managed or are used for projects that do not directly address the needs of the poor, their impact on poverty reduction may be minimal. Additionally, the capacity of local institutions to implement DAK-funded projects effectively might vary, leading to inconsistent outcomes in poverty reduction.

The mixed results of this study highlight the need for a more nuanced approach to poverty reduction strategies. The significant impact of DAU suggests that general, untargeted funding can effectively address poverty when it enhances public services that benefit the broader population. However, the lack of significant impact from PAD and DAK suggests potential issues in the specific allocation and utilization of these funds. Policymakers need to ensure that PAD revenues are managed transparently and directed towards programs that directly impact poverty. For DAK, there may be a need to revisit the criteria for project selection and implementation to ensure that these funds are used for initiatives with a high potential for reducing poverty. Regular monitoring and evaluation of DAK projects can help in identifying inefficiencies and implementing corrective measures.

The findings of this study suggest several avenues for future research. First, qualitative investigations could provide deeper insights into the reasons behind the ineffective use of PAD and DAK in reducing poverty. Understanding the governance and administrative challenges in managing these funds could help identify specific areas for improvement. Second, comparative studies with other provinces could help in identifying best practices and successful strategies in fund utilization. Finally, exploring the role of community participation and local governance in the implementation of funded projects could provide valuable information on how to enhance the impact of government funds on poverty reduction.

#### 4. CONCLUSION

Based on the analysis of panel data regression results and hypothesis testing, this study concludes that Regional Original Revenue (PAD) does not significantly impact poverty reduction in East Nusa Tenggara Province during the 2018-2021 period. In contrast, the General Allocation Fund (DAU) demonstrates a significant negative effect on poverty, indicating that increasing these funds is associated with a decrease in poverty levels. The Special Allocation Fund (DAK), however, does not show a significant influence on poverty. Collectively, these findings suggest that DAU plays a critical role in poverty alleviation, while PAD and DAK require further scrutiny.

These results emphasize the need for policymakers to prioritize and effectively manage the distribution of DAU to optimize its impact on poverty reduction. The lack of significant influence from PAD and DAK suggests a need to reassess and potentially redesign these funding mechanisms to enhance their effectiveness.

Further studies should explore the underlying reasons behind the non-significant impact of PAD and DAK on poverty. Additionally, research could investigate other potential factors affecting poverty in the region, such as infrastructure development, education, and health services, to provide a more comprehensive understanding of poverty alleviation strategies.

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