

## Detection of Fiscal Illusion in the Regional Financial System of Special Autonomy Fund Recipients (Case Study in Aceh, Papua, and West Papua)

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### Abstract

*This study aims to detect the phenomenon of fiscal illusion within the regional financial system in areas receiving Special Autonomy Funds (Dana Otonomi Khusus) in Indonesia, particularly in the provinces of Aceh, Papua, and West Papua. The study is motivated by the high dependency of regional governments on central government transfers—especially Special Autonomy Funds—amid efforts to enhance regional fiscal independence. A quantitative descriptive approach is employed, analyzing data on Regional Own-Source Revenue, General Allocation Funds, Revenue Sharing Funds, and Special Autonomy Funds in relation to Regional Expenditures from 2009 to 2024. The findings reveal that Regional Own-Source Revenue and Special Autonomy Funds do not have a significant effect on Regional Expenditures, whereas General Allocation Funds and Revenue Sharing Funds have a significant influence. Most regional spending continues to rely on central government transfers, particularly Special Autonomy Funds, while Regional Own-Source Revenue contributions remain relatively low. This condition indicates the potential occurrence of fiscal illusion, characterized by a mismatch between public perception and the actual contribution of local revenues to regional development.*

**Keywords:** *Fiscal illusion, special autonomy, regional finance, Regional Own- Source Revenue, central government transfers.*

### INTRODUCTION

The 1997 economic crisis exposed the weaknesses of Indonesia's highly centralized government system. This prompted the emergence of decentralization policies through Law No. 22 of 1999 concerning Regional Autonomy (Hastuti, 2018). Granting greater authority to the regions is expected to strengthen local democracy, improve the quality of public services, and support equitable development across all areas of Indonesia.

The implementation of regional autonomy brings consequences in the form of increased funding needs for the regions (Paat et al., 2019). The central government then provides transfer funds to help regions reduce fiscal disparities, both between the central and regional governments and among regions. The balancing fund policy is expected to encourage fiscal independence, although in reality many regions still face limitations in optimizing their own-source revenue.

The regions' dependence on transfers from the central government reflects challenges in developing local fiscal potential. Limited fiscal capacity, underutilized economic potential, and a lack of revenue innovation hinder the increase of own-source regional revenue (Widodo, 2019). This condition poses the risk of distortions in the relationship between regional government revenues and expenditures, which in public finance theory is known as the phenomenon of fiscal illusion.

Fiscal illusion was first introduced by Amilcare Puviani in 1903 (Dollery & Worthington, 1996). This phenomenon occurs when the public or even policymakers have a mistaken perception regarding the relationship between government revenue and expenditure. In the regional context, this can arise when local governments manipulate fiscal perceptions to encourage the public to be more compliant in paying taxes or to attract the central government's attention to provide larger transfer funds.

In the context of Indonesia, Aceh, Papua, and West Papua are regions with special status through the Special Autonomy policy. This fund is intended to accelerate development and improve the welfare of the communities in these areas. However, in practice, the management of the Otsus funds still faces issues of transparency, accountability, and effectiveness, which ultimately has the potential to create fiscal illusion among the public.

The phenomenon in Aceh shows that although significant Special Autonomy funds have been disbursed since 2008, the poverty rate remains relatively high (Zulfan & Mustika, 2018). This indicates the presence of the flypaper effect, where transfers from the central government do not necessarily encourage an increase in productive spending in the regions. A similar condition also occurs in Papua and West Papua, where limited bureaucratic capacity, geographical factors, and weak coordination hinder the optimal utilization of Special Autonomy funds

Based on these issues, this study formulates several key questions: whether Own-Source Regional Revenue (PAD), General Allocation Fund (DAU), Special Autonomy Fund (Otsus), and Revenue Sharing Fund (DBH) affect regional spending, and whether there are indications of fiscal illusion in regions receiving Otsus funds. These questions are important to answer in order to assess the extent to which fiscal decentralization and the special autonomy policy can enhance regional fiscal independence.

The purpose of this study is to analyze the influence of regional revenue sources on regional spending as well as to detect the presence of fiscal illusion among recipients of the Special Autonomy Fund (Otsus). The results of this research are expected to be beneficial for the government in evaluating transfer fund management strategies, for academics in enriching studies on regional finance, and for future researchers as a basis for developing research in different regions or contexts.

## METHOD

This study uses a quantitative descriptive approach with the aim of detecting the phenomenon of fiscal illusion in the finances of regions receiving the Special Autonomy Fund (Otsus) (Dyahningtyas et al., 2019). This research was conducted in the provinces of Aceh, Papua, and West Papua, from 2009 to 2024. The analysis is conducted using a revenue enhancement approach based on factual data and statistical formulas, allowing for the identification of whether fiscal illusion occurs in regional financial management.

### Sample

The research data was obtained from various official sources. Data on Regional Expenditure and the Special Autonomy Fund were sourced from the Directorate General of Fiscal Balance (DJPK) at the Ministry of Finance, while the General Allocation Fund (DAU) and Revenue Sharing Fund (DBH) were obtained from the Indonesia Database for Policy and Economic Research (INDO-DAPOER). Meanwhile, data on Own-Source Regional Revenue (PAD) came from the Central Statistics Agency (BPS). The research locations include the provinces receiving the Special Autonomy Fund, namely Aceh, Papua, and West Papua. The study period covers the years 2009 to 2024, totaling 16 years of observation. This extended timeframe is expected to provide a more comprehensive picture of the fiscal dynamics in the Otsus recipient regions

### Variabel

The scope of this study is focused on analyzing regional expenditure as the dependent variable, with independent variables consisting of Own-Source Regional Revenue (PAD), General Allocation Fund (DAU), Special Autonomy Fund (Otsus), and Revenue Sharing Fund (DBH). The selection of these variables is based on the research problem formulation that emphasizes the relationship between regional revenue and regional expenditure as well as the potential emergence of fiscal illusion.

### Fiscal Illusion Detection Regression Model

In this study, panel data regression analysis was employed. The use of panel data has several advantages, including its ability to accommodate heterogeneity across units, increase degrees of freedom and estimation efficiency, as well as reduce the potential for multicollinearity

(Arispen et al., 2021). According to the study by Gemme et al. (as cited in Adi & Ekaristi, 2009), fiscal illusion can be detected when there is a negative relationship between the dependent variable (regional revenue components) and the independent variable (regional expenditure).

The regression analysis model using the revenue enhancement approach, as applied in the studies of Nurhayati (2017) and Dyahningtyas et al. (2019), assumes that regional expenditure should serve as a reflection of the region's revenue capacity. The panel data regression model, according to Gujarati (2012), is formulated as follows:

$$BD = \alpha + \beta_1 PAD_{t,i} + \beta_2 DAU_{t,i} + \beta_3 DOK_{t,i} + \beta_4 DBH_{t,i} + e.$$

Where:

- **BD** = Regional Expenditure
- **$\alpha$**  = Constant
- **$\beta_1$ - $\beta_4$**  = Coefficients of independent variables
- **PAD** = Regional Own-Source Revenue
- **DAU** = General Allocation Fund
- **DOK** = Special Autonomy Fund
- **DBH** = Revenue Sharing Fund
- **e** = Error term
- **t** = Time (period 2009–2024)
- **i** = Provinces receiving Special Autonomy Fund

## RESULTS AND DISCUSSION

The Special Autonomy Fund (Otsus) plays a crucial role in the regional budgets (APBD) of recipient areas as a primary source of revenue that enhances fiscal capacity and enables the implementation of development programs tailored to local needs. This fund is budgeted separately, used transparently and accountably, and strictly supervised by the central government, regional governments, and oversight agencies to ensure its effectiveness and optimal benefits for the community (Setiaji & Adi Hari, 2007). Thus, the Otsus fund functions not only as a fiscal instrument but also as a driving force for the welfare and sustainable development of special regions in Indonesia.

### Model Feasibility Test

#### 1. Chow Test

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	44.455151	(2,41)	0.0000
Cross-section Chi-square	55.357064	2	0.0000

A cross-section probability value of 0.0000 indicates the selection of the Fixed Effect Model (FEM). However, because the number of cross sections is smaller than the number of independent variables, the Hausman test cannot be relied upon or may even fail to be calculated due to limited degrees of freedom. Therefore, based on Gujarati (2004) and Baltagi (2005), the FEM estimated using the Least Square Dummy Variable (LSDV) method is more appropriate in

cases of limited data, as it can capture unobserved individual variations and provide consistent, conservative, and unbiased estimates, especially when the validity of the random effects assumption is in doubt.

Best Model: Fixed Effect Model

**Table 1 Fixed Effect Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Consolusion
C	2398.75	1180.21	2.03248	0.0486	
PAD	-1.0182	1.04777	-0.9717	0.3369	Fiscal illusion occurs
DAU	1.60833	0.75644	2.12619	0.0396	There is no fiscal illusion
DOKA	-0.0968	0.26565	-0.3645	0.7173	Fiscal illusion occurs
DBH	18.9616	3.48154	5.44633	0.0000	There is no fiscal illusion

R-squared	0.813294	F-statistic	29.76603
Adjusted R-squared	0.785971	Prob-(Fstatistic)	0.000000

From the fixed effect model estimation result above the regression equation model can be obtained as follows

$$BD = 2398.75 - 1.0182PAD_{t,i} + 1.60833DAU_{t,i} - 0.0968DOK_{t,i} + 18.9616DBH_{t,i} + e_{t,i}$$

## Hypotesis Test

### 1. Coefficient of Determuntation

The results of the coefficient of determination test show that the adjusted R-squared value of 0.785971 indicates that approximately 78.59% of the variation in regional expenditure can be explained by the variables PAD, DAU, DOK, and DBH. This coefficient of determination suggests that these variables are able to capture most of the patterns in the data, while the remaining 21.41% is influenced by other variables not included in the regression model.

### 2. F-Test

The results of the F-test show that the probability value is 0.00, which is less than 0.05, while the calculated F value is 29.76603, exceeding the F-table value of 2.588836146 (29.766 > 2.5888). This indicates that simultaneously, the variables of local revenue (PAD), general allocation fund (DAU), special autonomy fund (DOK), and revenue-sharing fund (DBH) have a significant effect on regional expenditure.

### 3. T-Test

- a. The Local Revenue (PAD) variable shows a calculated t-value of 0.971, while the t-table value is 2.0128, so 0.971 < 2.0128. The significance value is 0.3369, which is much greater than the 0.05 significance level. Therefore, it can be concluded that Local Revenue (PAD) does not have a significant effect on Regional Expenditure.
- b. The General Allocation Fund (DAU) variable shows a calculated t-value of 2.126189, while the t-table value is 2.0128, so 2.126189 > 2.0128. The significance value is 0.0396, which is smaller than the 0.05 significance level. Therefore, it can be concluded

that the General Allocation Fund (DAU) has a significant effect on Regional Expenditure.

- c. The Special Autonomy Fund (DOK) variable shows a calculated t-value of 0.3645, while the t-table value is 2.0128, so  $0.3645 < 2.0128$ . The significance value is 0.7173, which is much greater than the 0.05 significance level. Therefore, it can be concluded that the Special Autonomy Fund (DOK) does not have a significant effect on Regional Expenditure.
- d. The Revenue Sharing Fund (DBH) variable shows a calculated t-value of 5.446, while the t-table value is 2.0128, so  $5.446 > 2.0128$ . The significance value is 0.0000, which is smaller than the 0.05 significance level. Therefore, it can be concluded that the Revenue Sharing Fund (DBH) has a significant effect on Regional Expenditure.

## DISCUSSION

The regression results show that Regional Own-Source Revenue (PAD) has no significant effect on regional expenditure and even tends to be negative, meaning that an increase in PAD is not followed by an increase in spending. This indicates that regional expenditure financing relies more on central government transfers rather than local fiscal independence. This phenomenon aligns with Amilcare Puviani's theory of fiscal illusion, where regions can still finance high expenditures despite low PAD, thereby reducing the motivation to optimize PAD and making fiscal independence appear illusory. The regression analysis shows that the General Allocation Fund (DAU) has a positive and significant relationship with regional expenditure, meaning that an increase in DAU encourages increased spending in Aceh, Papua, and West Papua. DAU becomes the main source of funding that strengthens regional fiscal capacity, enabling the implementation of development programs and public services. This finding is consistent with Keynesian theory, where government spending serves as an economic stimulus, and DAU allows regions to increase public expenditure without relying entirely on PAD, thereby supporting economic growth and equitable development.

The regression analysis shows that the Special Autonomy Fund (DOK) has no significant effect on regional expenditure, meaning that an increase in DOK is not followed by an increase in spending. This may be due to a lack of transparency, accountability, and human resource capacity in local governments, which undermines the effectiveness of fund utilization. According to Keynesian theory, government spending must be effective and well-targeted to provide an economic stimulus. If DOK is not managed properly, its multiplier effect on the local economy is not achieved, so regional spending does not increase. The regression analysis shows that Revenue Sharing Funds (DBH) have a positive and significant effect on regional expenditure, meaning that every increase in DBH is followed by an increase in spending. DBH becomes a key source of funding for development programs and public services, especially in regions with limited fiscal capacity. In line with Keynesian theory, government spending functions as a fiscal stimulus that drives economic growth and welfare, with regional expenditure driven by DBH capable of creating a multiplier effect and strengthening aggregate demand.

Fiscal illusion, first introduced by Amilcare Puviani, describes a condition where people feel they can obtain more public services without paying higher taxes. In the context of regional finance, this occurs when local governments do not optimize PAD due to the large central government transfers, creating fiscal dependence and weakening regional autonomy. The results of the panel data regression estimation using the Fixed Effect Model (2009–2024) for Aceh, Papua, and West Papua indicate the presence of fiscal illusion. PAD has a negative and insignificant coefficient, indicating no real influence on regional spending. In contrast, DAU has a positive and significant effect, demonstrating a flypaper effect, while the Special Autonomy Fund (DOKA) is

insignificant, reflecting its suboptimal utilization. DBH, on the other hand, shows a positive and significant effect, highlighting the strong role of resource-based regional revenue. Simultaneously, PAD, DAU, DOKA, and DBH significantly influence regional expenditure with an Adjusted  $R^2$  of 0.785971 (78.59%). These findings confirm that although fiscal transfers—particularly DAU and DBH—drive spending, the low contribution of PAD and weak utilization of Special Autonomy Funds reflect the still-low level of fiscal independence in regions receiving autonomy funds, thereby reinforcing the phenomenon of fiscal illusion.

## CONCLUSION

Regions receiving special autonomy funds consist of three provinces, namely Aceh, Papua, and West Papua. These three provinces have different socio-economic conditions that influence public perceptions of the real fiscal burden of the region. Based on the results of the panel data regression analysis conducted by the author, new insights were obtained regarding the variables that affect regional expenditure and an understanding of how fiscal illusion can occur in these provinces.

Regional Own-Source Revenue (PAD) has a negative and significant effect on Regional Expenditure. The increase in PAD does not affect regional spending because these three provinces rely heavily on central government transfers, thereby limiting the regions' ability to optimize their own-source revenue. The negative result also indicates that fiscal illusion occurs in the regional financial system of special autonomy fund recipients with respect to own-source revenue. General Allocation Fund (DAU) has a positive and significant effect on Regional Expenditure. This is because DAU plays an important role in strengthening regional fiscal capacity, which directly influences the amount of expenditure that can be made. Special Autonomy Fund (Otsus Fund) has a negative and significant effect.

This may occur due to a lack of transparency and accountability, which can lead to misuse and inefficiency in the utilization of the Otsus Fund. This indicates that fiscal illusion occurs in the regional financial system of special autonomy fund recipients with respect to the Special Autonomy Fund. Revenue Sharing Fund (DBH) has a positive and significant effect. This is because DBH serves as one of the main funding sources used to finance various development programs and public services in the regions, particularly in areas with limited local fiscal capacity. Fiscal illusion occurs in the three provinces receiving special autonomy funds, as indicated by the negative relationship of the Regional Own-Source Revenue and the Special Autonomy Fund variables with regional expenditure.

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