

THE EFFECT OF VILLAGE FUNDS AND SPECIAL AUTONOMY FUNDS ON POVERTY IN WEST PAPUA PROVINCE

Maman Kurniawan Syahputra Silaban*¹ 

Nunung Nuryartono²  Eka Intan Kumala Putri³ 

^{1, 2, 3} Faculty of Economics and Management, IPB University, Bogor, Indonesia

Email: maman6silaban@gmail.com¹; nuryartono@apps.ipb.ac.id²; ekaintan@apps.ipb.ac.id³

ARTICLE HISTORY

Received:

24 June 2025

Revised

11 October 2025

Accepted:

07 November 2025

Online available:

30 November 2025

Keywords:

Panel Data, Poverty, Special Autonomy Fund, Village Fund, West Papua.

***Correspondence:**

Name: Maman Kurniawan Syahputra Silaban
E-mail: maman6silaban@gmail.com

ABSTRACT

Introduction: Poverty is still a significant obstacle to development in Indonesia. To overcome this, fiscal policy through Village Funds is provided to all regions of Indonesia, including West Papua Province. In addition to Village Funds, West Papua Province had received Special Autonomy Funds from the Indonesian Government long before as a manifestation of asymmetric fiscal policy. However, the poverty conditions in West Papua Province have yet to be resolved. This study discusses the extent to which village funds and special autonomy funds affect poverty in West Papua Province.

Methods: This study uses a quantitative approach with descriptive and inferential analysis methods through panel data regression. The secondary data were collected from 12 regencies during the period 2015-2024. The poverty indicators used are the poverty headcount ratio (percentage) and the poverty headcount (in thousands of people).

Results: The study results show that village funds in the current year and the previous year (t-1) significantly improve poverty indicators, while Special Autonomy Funds do not. Other variables, such as the Human Development Index (HDI), significantly reduce poverty levels, while the Gini Ratio significantly worsens the poverty headcount.

Conclusion and suggestion: Village Funds have been statistically proven to reduce poverty outcomes in West Papua Province, while Special Autonomy Funds have not shown a significant effect. This finding underlines the importance of a comprehensive evaluation of the management of Special Autonomy Funds. In the future, development efforts should focus on enhancing the quality of human resources and making genuine efforts to reduce income inequality.

INTRODUCTION

Poverty is a condition in which individuals living in a region experience limitations in meeting their needs for clothing, food, and shelter. This condition is a serious problem that hinders development in Indonesia. Poverty is a critical indicator in assessing the

success of a region's growth, as it directly affects socio-economic stability (Oktaviana, Primandhana, & Wahed, 2021). According to the Central Statistics Agency (BPS, 2024a), the poverty rate in Indonesia in September 2024 was 8.57%, with 24.06 million people living in poverty. Spatially, the most significant number of poor people was found in Java (12.62 million people). In 2024, the highest poverty ratio was reported in Maluku and Papua, at 18.62% (BPS, 2024a). This is the background for the Indonesian Government's continued efforts to eradicate poverty.

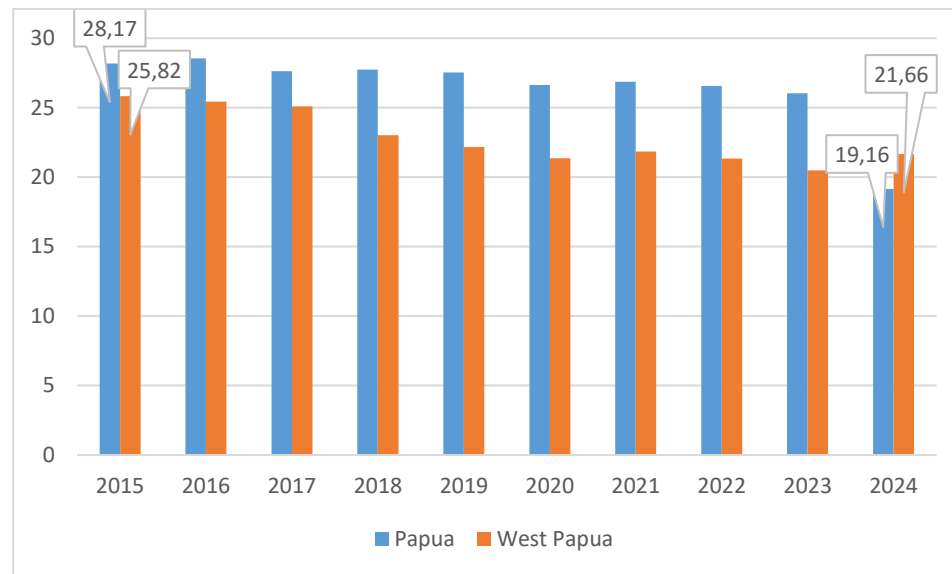


Figure 1. Poverty Headcount Ratio in West Papua and Papua Provinces, 2015-2024

Source: BPS (2024)

Based on Santi (2019) research results, 32 of the 34 districts with high priority for poverty alleviation are located on the island of Papua, including districts in West Papua Province. Data from the West Papua Provincial Statistics Agency (BPS, 2024b), indicate that the poverty ratio in West Papua Province reached 21.09% in 2024, which is significantly higher than the national average poverty ratio for the same period, at 8.57%. A comparison with Papua Province—which also receives Special Autonomy Funds—reveals a striking disparity: during 2023–2024, the poverty ratio in Papua fell dramatically from 26.03% to 19.16%, while in West Papua it fell from 24.60% to 21.09%. Historically (2015–2024), Papua recorded an average decline of 0.99 points per year (from 28.17% to 19.16%), while West Papua only recorded 0.94 points per year (from 30.47% to 21.09%). Thus, in a decade, the average poverty ratio in West Papua districts fell by 9.38 points—but this achievement remains relatively small when compared to the amount of fiscal transfers received through the Village Fund and the Special Autonomy Fund.

These empirical findings raise a fundamental question: why have large fiscal transfers not been able to accelerate poverty alleviation in West Papua? Theoretically, the effectiveness of fiscal transfers in reducing poverty in remote areas, such as West Papua,

can be understood through the lens of fiscal federalism (Oates, 1999) and decentralization theory (Faguet, 2014). According to Oates (1999), fiscal decentralization increases the efficiency of resource allocation because local governments are better equipped to understand local needs. However, Faguet emphasizes that the positive effects of decentralization on development only emerge if they are supported by administrative capacity, community participation, and accountability mechanisms. In the context of West Papua, with its geographical isolation, cultural heterogeneity, and limited bureaucratic capacity, weaknesses in these pillars have the potential to hinder the conversion of fund allocations into tangible development outcomes (World Bank, 2023). Therefore, the impact of Village Funds and Special Autonomy Funds cannot be measured solely by the size of the budget; instead, it must be analysed within the framework of governance quality and local context.

Village Funds and Special Autonomy Funds are part of the central Government's fiscal policy instruments allocated to regional governments, aiming to encourage development and economic growth in the regions to achieve social and financial stability. According to the Directorate General of Fiscal Balance, Ministry of Finance (DJPK, 2024), the total Village Funds transferred to regencies in West Papua Province amounted to IDR 449.32 billion in 2015 and increased to IDR 1.4 trillion in 2024. Meanwhile, the Special Autonomy Fund is larger and more stable, with amounts of IDR 1.71 trillion in 2015 and IDR 1.79 trillion in 2024 (DJPK, 2024). Through this relatively large fiscal transfer, it is hoped that it can improve the welfare of the people in West Papua Province.

However, significant improvements in poverty conditions have not been observed in West Papua Province despite the provision of substantial fiscal support; in fact, poverty reduction has been slow in most districts (Pattinasarany, Herudin, Irtanton, & Iswanto, 2021). The discrepancy between budget allocation and development outcomes raises important questions about the effectiveness of fiscal transfers in alleviating poverty — questions that previous research has not fully addressed.

Indeed, while several studies have examined the impact of the Special Autonomy Fund and the Village Fund on regional development, the majority have methodological and conceptual limitations. Firstly, the majority only consider direct effects (contemporaneous effects) and overlook the potential for delayed effects. However, policy implementation in West Papua is frequently hindered by geographical isolation, limited bureaucratic capacity, and socio-cultural complexity (Pattinasarany et al., 2021). Second, many evaluations still focus on budget absorption as a measure of success, rather than on measurable development outcomes such as an absolute reduction in the number of poor people (Kuddy, 2018). Third, previous studies tend to overlook heterogeneity

between districts, thereby failing to capture variations in policy effectiveness that are determined by local contexts ([Wasistiono & Sartika, 2022](#)).

As a result, there has been no comprehensive study examining the interaction between fiscal design, governance capacity, and poverty dynamics at the district level in West Papua—let alone one that simultaneously analyzes the impact of Village Funds and Special Autonomy Funds on two dimensions of poverty (ratio and absolute number), including delayed effects. This gap is the basis for this study.

This study aims to evaluate the impact of the Village Fund and the Special Autonomy Fund—both directly and with delayed effects—on the poverty ratio and the number of people living in poverty in West Papua Province. The approach employed is quantitative, utilising panel data regression analysis to combine descriptive and inferential methods, based on data from 12 districts for the period 2015-2024. This study is expected to serve as a reference in developing poverty alleviation strategies in West Papua Province.

LITERATURE REVIEW

Macroeconomically, the role of fiscal policy in the economy can be understood through three classic functions proposed by [Musgrave & Musgrave \(1989\)](#), namely allocation, distribution, and stabilization. The allocation function relates to the Government's ability to provide public goods and services efficiently; the distribution function seeks to reduce economic inequality through income redistribution mechanisms; while the stabilisation function aims to maintain macroeconomic stability by controlling business cycles, inflation, and unemployment. In the national context, the distribution function is one of the main instruments for overcoming poverty. However, when fiscal policy is implemented at the regional level through transfer instruments such as Village Funds and Special Autonomy Funds, Musgrave's macroeconomic approach becomes inadequate because it does not explain how fiscal decentralization operates in a heterogeneous local context, especially in remote areas such as West Papua.

To understand the effectiveness of decentralized fiscal policy in reducing poverty, the theoretical framework must be expanded with the principles of fiscal federalism ([Oates, 1999](#)) and decentralization theory ([Faguet, 2014](#)). [Oates \(1999\)](#) argues that fiscal decentralization increases the efficiency of resource allocation because local governments have a better understanding of the preferences and needs of local communities. However, [Faguet \(2014\)](#) emphasizes that the positive effects of decentralization only emerge if they are supported by three main pillars: the administrative capacity of local governments, community participation in decision-making, and transparent accountability mechanisms. In the context of West Papua, which is characterized by geographical isolation, cultural diversity, and limited bureaucratic capacity, these pillars are often weak. As a result, fiscal

transfers risk becoming merely administrative inputs without producing measurable development outcomes, as noted by the [World Bank \(2023\)](#) in a report on persistent poverty hotspots in remote areas.

Performance differences between regions underscore the importance of a context-based approach. In Aceh, the Special Autonomy Fund has proven effective in improving access to education and healthcare services, and has significantly reduced poverty rates ([Litami & Lutfi, 2023](#); [Yusri, 2022](#)). Conversely, in West Papua, the implementation of both funds faces significant structural challenges, including weak planning, a lack of policy coordination between levels of Government, and inadequate oversight ([Wasistiono & Sartika, 2022](#)). Empirical evidence suggests that the Village Fund has the potential to enhance access to basic infrastructure and reduce poverty rates ([Mardalena, Adji, Rohima, Harunurrasyid, & Nida, 2023](#)). However, its effectiveness is highly dependent on transparency, accountability, and local participation ([Dewi, 2020](#); [Hulu & Rahim, 2022](#)). In West Papua, the limited capacity of village officials and low regional accessibility hinder the realization of this transformative potential ([Pentury, 2023](#)). Even when [Hafiszrianda & Iek \(2025\)](#) found a significant impact on the Human Development Index and the Independent Village Index, the elasticity value remained less than one, indicating that each additional Rupiah of funding did not result in a proportional reduction in poverty.

The limitations of previous studies further underscore the need for a more comprehensive approach. The majority of studies only examine immediate effects and ignore delayed effects, even though in the context of West Papua, the impact of policies is often only felt after one to two years due to logistical and administrative barriers ([Pattinasarany et al., 2021](#)). Furthermore, evaluations of funds, especially the Special Autonomy Fund, continue to focus on input indicators, such as budget absorption, rather than measurable development outcomes, including a reduction in the absolute number of people living in poverty ([Kuddy, 2018](#)). Indeed, the poverty indicators employed by BPS, Bappenas, and the World Bank consistently emphasize the importance of measurements based on the poverty headcount ratio and poverty headcount as benchmarks for policy outcomes.

This study addresses this gap by analysing the immediate and delayed impacts of village and special autonomy funds on two dimensions of poverty: the poverty ratio and the absolute number of people living in poverty in 12 districts in West Papua between 2015 and 2024. Building on the methodology of [Azmi, Nuryartono, & Binenbaum \(2020\)](#), who successfully tested the lag effect of the Village Fund in Aceh, this study applies the approach to a far more complex geographical, social, and institutional context. This study answers empirical questions about fiscal effectiveness. It also contributes to the

theoretical understanding of the limits of fiscal decentralization. This is in regions with deep structural constraints.

Research Objective and Hypotheses

This study investigates the direct and lagged effects of Village Funds and Special Autonomy Funds on the poverty headcount ratio and the poverty headcount in West Papua Province from 2015 to 2024. The following hypotheses are proposed:

Simultaneous Hypotheses (F-Test):

H1: Village Funds and Special Autonomy Funds jointly influence the poverty headcount ratio.

H2: Village Funds and Special Autonomy Funds jointly influence the poverty headcount.

H3: Lagged Village Funds and Lagged Special Autonomy Funds jointly influence the poverty headcount ratio.

H4: Lagged Village Funds and Lagged Special Autonomy Funds jointly influence the poverty headcount.

Partial Hypotheses (t-Test):

H5a: Village Funds significantly affect the poverty headcount ratio.

H5b: Special Autonomy Funds significantly affect the poverty headcount ratio.

H6a: Village Funds significantly affect the poverty headcount.

H6b: Special Autonomy Funds significantly affect the poverty headcount.

H7a: Lagged Village Funds significantly affect the poverty headcount ratio.

H7b: Lagged Special Autonomy Funds significantly affect the poverty headcount ratio.

H8a: Lagged Village Funds significantly affect the poverty headcount.

H8b: Lagged Special Autonomy Funds significantly affect the poverty headcount.

RESEARCH METHODS

To investigate the relationship, the study applies panel data estimation methods from 12 regencies over the 2015–2024 period, in order to assess both the direct and lagged effects of Village Funds and Special Autonomy Funds on two poverty indicators in West Papua Province: the poverty headcount ratio (%) and the poverty headcount (in thousands of people).

The use of panel data is considered the most appropriate approach for analyzing both spatial and temporal dimensions, as panel regression enables the identification of region-and time-specific effects, as demonstrated by [Sebayang \(2023\)](#). Similarly, studies by [Arafat, Wiwiek Rindayati, & Sahara \(2020\)](#) and [Hariyani, Priyarsono, & Asmara \(2018\)](#) employed panel data models using descriptive and inferential econometric approaches to capture regional characteristics throughout the observation period.

Several control variables are included based on prior empirical findings (Azmi et al., 2020; Febriandika, Rahayu, & Kumar, 2022; Saputri, Millah, Falah, & Dewi, 2025; Widiprana, 2022). These variables are Gross Domestic Regional Product (GDRP), Human Development Index (HDI), Open Unemployment Rate (OUR), and the Gini ratio, all of which are widely recognized as determinants of poverty. The following panel regression models are estimated:

Poverty Headcount Ratio Model:

$$POVR_{it} = \beta_0 + \beta_1 VF_{it} + \beta_2 SAF_{it} + \beta_3 GDRP_{it} + \beta_4 HDI_{it} + \beta_5 OUR_{it} + \beta_6 GINI_{it} + u_i + \epsilon_{it} \quad [1]$$

Poverty Headcount Model:

$$POVERTY_{it} = \beta_0 + \beta_1 VF_{it} + \beta_2 SAF_{it} + \beta_3 GDRP_{it} + \beta_4 HDI_{it} + \beta_5 OUR_{it} + \beta_6 GINI_{it} + \epsilon_{it} \quad [2]$$

Whereas:

$POVR_{it}$	: Poverty Headcount Ratio
$POVERTY_{it}$	: Poverty Headcount
VF_{it}	: Village funds
SAF_{it}	: Special Autonomy Funds
$GDRP_{it}$	: Gross Domestic Regional Product at constant prices
HDI_{it}	: Human Development Index
OUR_{it}	: Open Unemployment Rate
$Gini_{it}$	: Gini ratio in regency
β_0	: Constanta
$\beta_1 \beta_2 \beta_3 \beta_4 \beta_5 \beta_6$	: Variable coefficients
ϵ_{it}	: Idiosyncratic error term
i	: Cross-sectional unit
t	: Time series (2015-2024)

This study's data are secondary, as shown in Table 1. This data is obtained from official publications of relevant institutions, such as the Statistics Indonesia of West Papua Province (BPS), the Directorate General of Fiscal Balance, Ministry of Finance (DJP), and the West Papua Regional Office of the Audit Board of the Republic of Indonesia (BPK). The cross-sectional data of this study consist of 12 regencies in West Papua Province with time series data from 2015 to 2024. Especially in 2024, researchers still grouped the 12 regencies in the West Papua Province, even though at the end of 2022, five regencies entered the provincial expansion area, namely

Southwest Papua Province. This was done for the sake of consistency in the mention and continuity of the observed unit of analysis.

Table 1. Variable Description

Variable	Definition	Source
Poverty Headcount Ratio (POVR), in percent (%)	The percentage of the population living below the poverty line (relative)	BPS
Poverty Headcount (POVERTY), in thousand people	Total number of individuals categorized as poor based on the poverty line (absolute)	BPS
Village Funds (VF), in billion Rupiah	Recognition of Village Funds Sent to the Regional Government from the Central Government	DPJK
Special Autonomy Funds (SAF), in billion Rupiah	Recognition of Special Autonomy Funds Sent to the Regional Government from the Central Government	BPK, DPJK
GDRP (GDRP), in billion Rupiah	The total value of goods and services produced in a region at constant prices	BPS
Human Development Index (HDI), on a scale of 0-100	Percentage of human development achievement	BPS
Open Unemployment Rate (OUR), in %	Percentage of unemployment to labor force	BPS
Gini Ratio (Gini), on a scale of 0-1	The level of income inequality in a region	BPS

Source: Table prepared by the author (2025)

To ensure the estimation results are valid and reliable, this study uses a series of model selection and diagnostic tests. First, the Chow test is used to determine whether the panel data regression approach is more appropriate than the pooled ordinary least squares (OLS) approach. Secondly, the Hausman test is conducted to select between the fixed effects model (FEM) and the random effects model (REM). The results of these tests show that the REM is better suited to estimating the effect of funds on the poverty headcount ratio, while the FEM is better suited to estimating the impact on the poverty headcount. Thirdly, to address potential endogeneity, particularly reverse causality whereby poverty affects fund allocation, this study incorporates lagged Village Funds and Special Autonomy Funds variables ($t-1$) as instruments in the dynamic model specification.

Furthermore, classical assumption tests were conducted comprehensively. Multicollinearity was tested using the variance inflation factor (VIF); heteroscedasticity was tested using the Breusch-Pagan test for REM and the modified Wald test for FEM; and autocorrelation was tested using the Wooldridge test. The results showed that the FEM model violated the assumptions of heteroscedasticity and autocorrelation. Therefore, FEM estimation was redone with clustered robust standard errors at the district level to ensure the validity of statistical inference (Metanda & Oktora, 2022).

RESULT AND ANALYSIS

This section presents the results of a panel data analysis examining the impact of Village Funds and Special Autonomy Funds on poverty in West Papua Province. The first part presents descriptive statistics and an initial overview to show the distribution and relationship between variables. In the next section, panel regression estimates are presented with a focus on two aspects. First, the impact on the ratio of the number of poor people and the absolute number of poor people. Second, the delayed impact on these two poverty indicators is calculated using the same model as in the previous estimates. These findings will then be discussed separately at the provincial and district levels.

Exploratory Data Analysis

Table 2 presents a statistical summary of each variable used in this study, generated using Stata 14 software.

Table 2. Descriptive Statistics of Research Variables

Variable	Obs	Mean	Min	Max	Std. Dev
Village Funds (VF)	120	108.2952	16.73612	197.4666	46.3795
Special Autonomy Funds (SAF)	120	152.8509	16.81474	468.2735	68.08134
Human Development Index (HDI)	120	62.11183	49.77	73.83	5.246925
Open Unemployment Rate (OUR)	120	3.917667	0.12	11.49	2.443374
Gini Ratio (Gini)	120	0.3741	0.25	0.482	0.0421975
Gross Domestic Regional Product (GDRP)	120	4263.515	113.0703	35029.08	7040.154
Poverty Headcount Ratio (POVR)	120	26.96008	14.41	39.46	6.989381
Poverty Headcount (POVERTY)	120	14.784	4.59	40.31	9.908607

Source: Processed data, 2025

The results in Table 2 show that during the period from 2015 to 2024, the average Village Fund received by each district in West Papua Province was IDR 108.29 billion, with the lowest amount being IDR 16.73 billion and the highest being IDR 197.46 billion. The average value of the Special Autonomy Fund is higher than the Village Fund, amounting to IDR 152.85 billion, with the highest value reaching IDR 468.27 billion.

The Human Development Index (HDI) in West Papua Province falls within the moderate category, with an average score of 62.11 points. However, the standard deviation of 5.24 points indicates a high level of inequality between districts. Then, the average unemployment rate (OUR) of 3.91% indicates a relatively lower unemployment rate when compared to the national average. The Gini ratio, which ranges from 0.250 to 0.482 with an average of 0.374, indicates moderate income inequality. In addition, the

highest GDRP reached IDR 35,029.08, the lowest was IDR 113.07 billion, and the average was IDR 4,263.51 billion, indicating significant economic inequality between districts.

Meanwhile, the average poverty rate during the observation period was 26.96%, which is relatively high compared to the national average. The average number of people living in poverty in each district was 14,780, with the highest figure reaching 40,310 people.

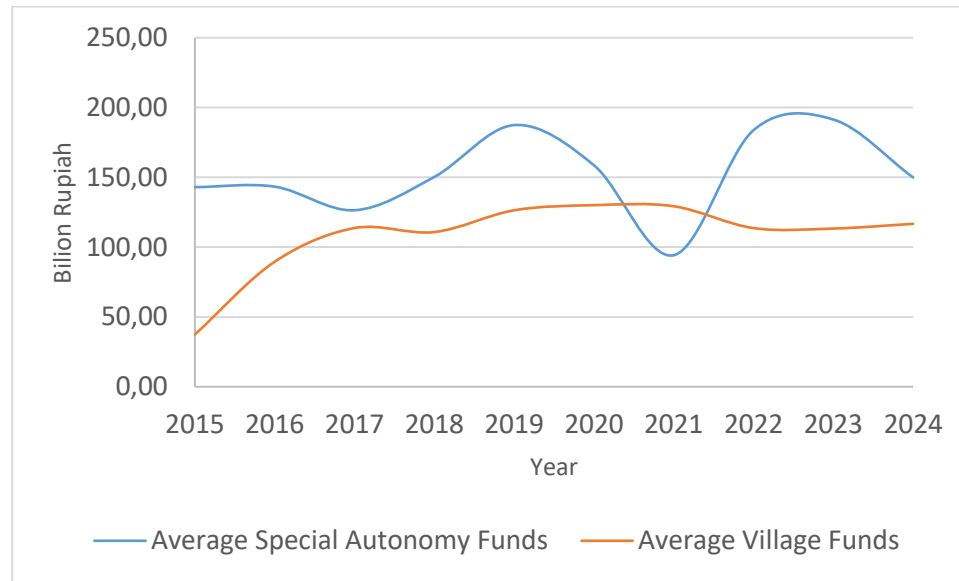


Figure 2. The trend of Average Village Funds and Special Autonomy Funds per Regency in West Papua Province (2015–2024)

Source: Processed from BPK and DJPK data, 2025

Figure 2 shows that the average transfer trend from the Village Fund is relatively stable when compared to the Special Autonomy Fund. This difference in pattern is due to the distinct policy formulations and fiscal implementations underlying each funding instrument, as discussed in the previous section. Although the value of Special Autonomy Fund transfers fluctuates slightly throughout the year, the nominal amount consistently exceeds that of the Village Fund.

Figure 3 illustrates the trend of the average poverty ratio per district in West Papua. Overall, the average poverty ratio fell from 30.47% in 2015 to 23.85% in 2024. This figure shows an improvement in the average regional development across all districts in West Papua. When accumulated, this trend shows a decrease of 6.62 percentage points in the poverty rate over a decade.

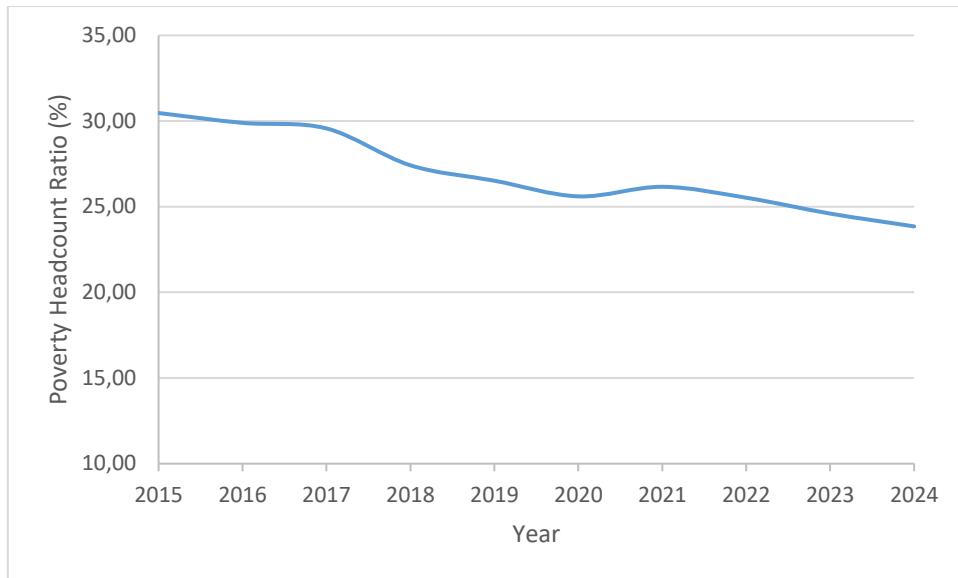


Figure 3. Trend of Average Poverty Headcount Ratio per Regency in West Papua Province (2015–2024)

Source: Processed from BPS data, 2025

Figure 4 illustrates the average trend of the number of people living in poverty per district in West Papua. Overall, the average number of people living in poverty per district shows a decline, but it remains fluctuating. Over a decade, the decline reached 1,200 people. When calculated as an annual average, this figure corresponds to a decline of approximately 120 people per year. This figure is relatively small when compared to the total number of people categorized as poor in West Papua, which reaches hundreds of thousands.

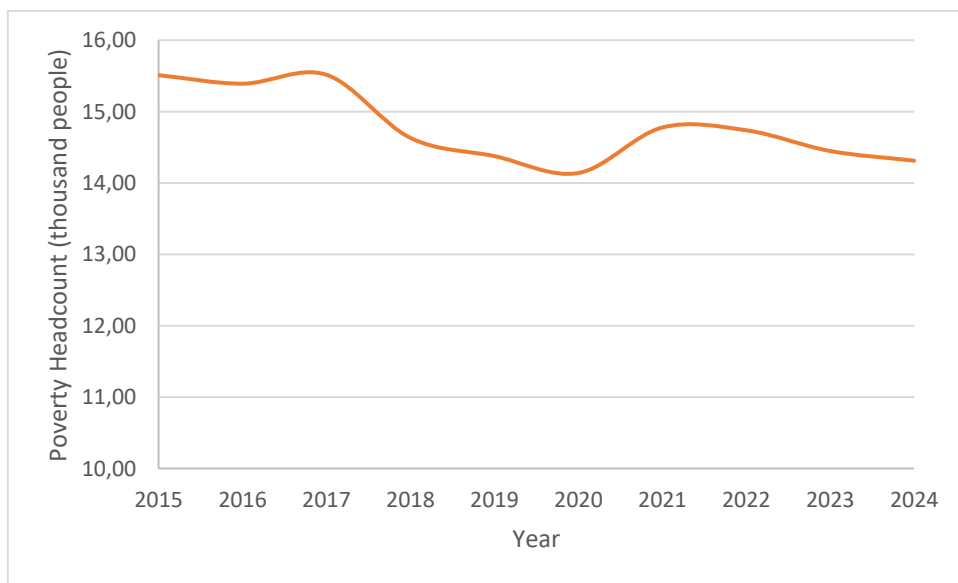


Figure 4. Trend of the Average Poverty Headcount Ratio per Regency in West Papua Province (2015–2024)

Source: Processed from BPS data, 2025

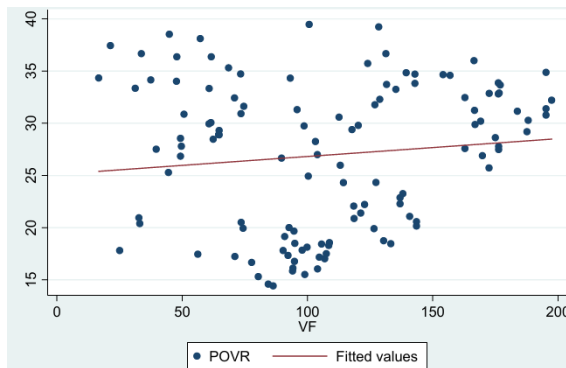


Figure 5. Scatter Plot of Village Funds Versus Poverty Headcount Ratio (%), 2015–2024

Source: Processed data, 2025

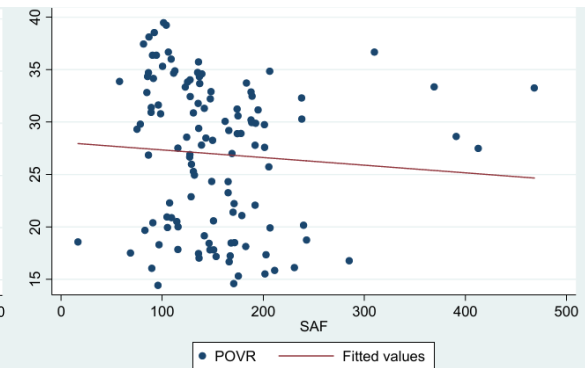


Figure 6. Scatter Plot of Special Autonomy Funds Versus Poverty Headcount Ratio (%), 2015–2024

Source: Processed data, 2025

In Figure 5, Village Funds do not exhibit a strong relationship with the ratio of the poor population. The scattered points show a wide distribution of data without a clear linear pattern. These findings can serve as a basis for further testing to determine whether the impact of Village Funds on poverty is statistically significant or merely a coincidence apparent in the graph.

In contrast, Figure 6 shows that most of the points tend to decrease as the Special Autonomy Fund increases, indicating a negative relationship. This can be interpreted as meaning that districts with high allocations of the Special Autonomy Fund tend to have lower poverty rates, although not all districts follow this pattern. The results of this visualization need to be further tested through statistical analysis.

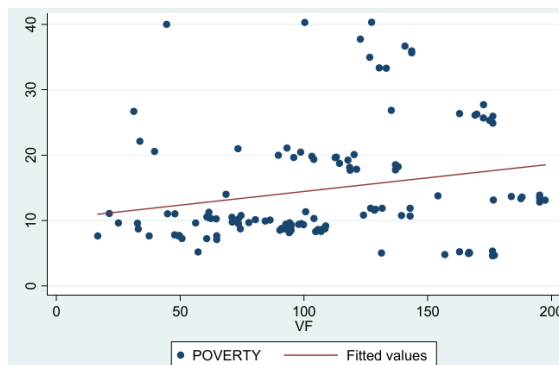


Figure 7. Scatter Plot of Village Funds Versus the Poverty Headcount (thousands of people), 2015–2024

Source: Processed data, 2025



Figure 8. Scatter Plot of Special Autonomy Funds Versus the Poverty Headcount (thousands of people), 2015–2024

Source: Processed data, 2025

Both scatter plots (figures 7 and 8) reveal an upward trend in poverty headcount as fund allocations increase. This visual pattern provides a crucial preliminary indication.

It forms the basis for further statistical analysis to determine whether the observed relationship between Village Funds and Special Autonomy Funds and the poverty headcount is statistically significant or merely a coincidental correlation within the dataset.

However, the direction of the relationship shown visually cannot be directly interpreted as a statistically significant relationship. Furthermore, it is necessary to consider the potential for a delayed effect, where the influence of Village Funds and Special Autonomy Funds may not be evident in the same budget year, but rather have an impact in the following year. Therefore, in the panel data regression estimation, the lag variable ($t-1$) for both types of funds is included to evaluate whether the effect is direct or delayed.

Panel Model Estimation Results

Table 3. Results of Panel Regression Model Selection Tests for Poverty Indicators

Model Test	Poverty Headcount Ratio	Poverty Headcount
Chow Test	$F = 227.36$; $p = 0.0000$	$F = 419.89$; $p = 0.0000$
Hausman Test	$X^2 = 1.11$; $p = 0.9532$	$X^2 = 21.46$; $p = 0.0007$
Uji Breusch-Pagan LM	$X^2 = 411.16$; $p = 0.0000$	

Source: Stata output, processed data (2025)

According to the model selection results in Table 3, the REM model was the most suitable for analyzing the effects of Village Funds and Special Autonomy Funds on the poverty headcount ratio. In contrast, the FEM model was selected for analyzing the poverty headcount.

Table 4 shows that the Variance Inflation Factor (VIF) values of all variables are below 10, indicating that there is no multicollinearity, and thus the model is suitable for further estimation.

Table 4. Multicollinearity Test Results

Variables	VIF	1/VIF
Village Funds	1.08	0.928914
Special Autonomy Funds	1.18	0.847830
Human Development Index	2.15	0.464444
Open Unemployment Rate	1.84	0.544441
Gini Ratio	1.19	0.839813
Gross Domestic Regional Product (GDRP)	1.24	0.808585

Source: Stata output, processed data (2025)

The results presented in Table 5 show that the value of Prob > F = 0.0000, indicating strong evidence of heteroskedasticity in the FEM model.

Table 5. Heteroskedasticity Test Results

Statistics Test	Value
F-statistik	4428.70
Prob > F	0.0000
Decision	H ₀ rejected → heteroskedasticity detected

Source: Stata output, processed data (2025)

Table 6 below shows a p-value of 0.0016, indicating the presence of autocorrelation in the residuals of the FEM model.

Table 6. Autocorrelation Test Results

Statistik Test	Value
F-statistik	17.342
Prob > F	0.0016
Decision	H ₀ rejected → autocorrelation detected

Source: Stata output, processed data (2025)

Based on the results of multicollinearity, heteroskedasticity, and autocorrelation tests, it can be concluded that the FEM model violates two classical assumptions—heteroskedasticity and autocorrelation. Consequently, the FEM was re-estimated using robust standard errors to ensure the validity of statistical inference (Metanda & Oktora, 2022). Classical assumption tests were not formally conducted for the REM model due to diagnostic limitations regarding autocorrelation under REM. Nevertheless, robust standard errors were applied to enhance the reliability of the estimation results.

Estimation Results of the REM: The Effect of Village Funds and Special Autonomy Funds on the Poverty Headcount Ratio (Provincial Level)

Table 7 presents the estimation results of Village Funds, Special Autonomy Funds, and control variables on the poverty headcount ratio. The results of the REM estimation indicate that Village Funds have a statistically significant adverse effect on the poverty rate in all models. This applies both separately and in combination with Special Autonomy Funds. The negative coefficient of Village Funds shows that, on average, higher fund allocations are associated with lower poverty rates across all districts. Although Special Autonomy Funds also show a negative direction, their effect is not significant.

Then, in the model that includes all control variables, Village Funds remain significant at the 10% level, while Special Autonomy Funds still do not show significance. The Human Development Index (HDI) has a significant adverse effect on poverty, whereby each one percentage point increase in the HDI is associated with a 1.14 percentage point

decrease in the poverty rate. This means that improvements in quality of life, such as education, health, and purchasing power, have a direct impact on poverty reduction. Meanwhile, the OUR variable, the Gini ratio, and the GDRP are not significant.

**Table 7. Panel Regression Estimation Results Using the Random Effect Model
on Poverty Headcount Ratio**

Independent Variables	Model 1 (Village Funds)	Model 2 (Special Autonomy Funds)	Model 3 (Village & Special Autonomy Funds)	Model 4 (All Variables)
Village Funds (VF)	-0.0502071*** (0.0063457)		-0.0502993*** (0.0065073)	-0.0064074* (0.0034339)
Special Autonomy Funds (SAF)		-0.0068378 (0.008288)	-0.0067533 (0.0048773)	-0.0008291 (0.0020112)
Human Development Index (HDI)				-1.143434*** (0.1413437)
Open Unemployment Rate (OUR)				-0.0119133 (0.0808358)
Gini Ratio				2.887384 (3.085993)
GDRP				-0.0000532 (0.0000771)
Constant (Intercept)	32.39727*** (2.290311)	28.00525*** (2.342989)	33.43951*** (2.466734)	97.99462*** (10.14374)
Prob > X ²	0.0000	0.4094		0.0000
R-squared (overall)	0.0128	0.0050		0.4087
N (Obs.)	120	120	120	120

Note:

*** p<0.01, ** p<0.05, * p<0.1

Source: Stata output, processed data (2025)

Estimation Results of the FEM: The Effect of Village Funds and Special Autonomy Funds on Poverty Headcount (Regency-Level Analysis)

The complete estimation results, with clustered standard error correction, are presented in Table 8 below. The FEM model used to analyze temporal dynamics in each district shows that Village Funds statistically have a significant effect on the number of poor people in all models. This includes instances where it is linked to Special Autonomy Funds and other variables. Village Funds can consistently reduce the number of people living in poverty in each district.

Table 8. Panel Regression Estimation Results Using the Fixed Effect Model on Poverty Headcount

Independent Variables	Model 1 (Village Funds)	Model 2 (Special Autonomy Funds)	Model 3 (Village & Special Autonomy Funds)	Model 4 (All Variables)
Village Funds (VF)	-0.011972** (0.0051404)		-0.0119712** (0.0051127)	-0.0091675*** (0.0027705)
Special Autonomy Funds (SAF)		-0.0028139 (0.0023416)	-0.0028129 (0.0020071)	-0.0018016 (0.0016506)
Human Development Index (HDI)				-0.1144801 (0.0936933)
Open Unemployment Rate (OUR)				-0.0696522 (0.0797844)
Gini Ratio				4.27158** (1.49957)
GDRP				-0.0000883 (0.0000515)
Constant (Intercept)	16.08051*** (0.5566764)	15.2141*** (0.3579223)	16.51038*** (0.7910466)	22.21419*** (5.965635)
Prob > χ^2	0.0399	0.2547	0.1067	0.0227
R-squared (within)	0.1332	0.0283	0.1615	0.2268
N (Obs.)	120	120	120	120

Note.

*** p<0.01, ** p<0.05, * p<0.1

Source: Stata output, processed data (2025)

In contrast, Special Autonomy Funds again show no statistically significant effect. In Model 4, Village Funds remain significant at the 1%. In comparison, the Gini Ratio becomes significant at the 5% level with a positive coefficient, indicating that income inequality is correlated with an increase in the poverty headcount. The variables HDI, OUR, and GDRP remain statistically insignificant.

Lagged Effects of Village Funds and Special Autonomy Funds on Poverty Headcount Ratio (REM Model)

As previously discussed, there may be a lagging effect in which the influence of Village Funds and Special Autonomy Funds is not immediately reflected in the same year but becomes evident in the following year. Therefore, the panel regression model also includes one-year lag variables ($t-1$) for Village Funds and Special Autonomy Funds to evaluate whether their impact on the poverty headcount ratio and the poverty headcount is direct or delayed. The model used in Table 9 and Table 10 below remains consistent

with the previously selected best-fit models: REM for the poverty headcount ratio and FEM for the poverty headcount.

Table 9. Estimation Results of the Lagged Effects of Village Funds and Special Autonomy Funds on Poverty Headcount Ratio

Independent Variables	Model 1 (Village Funds)	Model 2 (Special Autonomy Funds)	Model 3 (Village & Special Autonomy Funds)	Model 4 (All Variables)
Lagged Village Funds (lag_VF)	-0.048319*** (0.0056527)		-0.0483591*** (0.0058427)	-0.011611*** (0.0030424)
Lagged Special Autonomy Funds (lag_SAF)		-0.007263 (0.0090641)	-0.0071105 (0.0057524)	-0.001358 (0.0018674)
Human Development Index (HDI)				-1.051841*** (0.126994)
Open Unemployment Rate (OUR)				-0.0428796 (0.0663272)
Gini Ratio				1.697901 (4.141216)
GDRP				-0.000028 (0.0000721)
Constant (Intercept)	31.75783*** (2.290579)	27.68269*** (2.361799)	32.85129*** (2.476096)	93.3334*** (9.09805)
Prob > X2	0.0000	0.4230	0.0000	0.0000
R-squared (overall)	0.0116	0.0081	0.0068	0.4080
N (Obs.)	120	120	120	120

Note.

*** p<0.01, ** p<0.05, * p<0.1

Source: Stata output, processed data (2025)

The estimation results presented in Table 9 show that Village Funds from the previous year have a statistically significant effect on reducing the poverty headcount ratio, with a p-value < 0.01 and a coefficient of –0.0116. This indicates that an increase of IDR 1 billion in Village Fund allocation in the previous year is associated with a 0.0116 percentage point decrease in the poverty headcount ratio in the following year, on average across regencies. In contrast, the Special Autonomy Fund from the previous year does not show a statistically significant effect on the poverty headcount ratio (p-value = 0.467), suggesting that its allocation does not have a lagged aggregate effect at the provincial level.

Lagged Effects of Village Funds and Special Autonomy Funds on Poverty Headcount (FEM Model)

Table 10. Estimation Results of the Lagged Effects of Village Funds and Special Autonomy Funds on Poverty Headcount Ratio

Independent Variables	Model 1 (Village Funds)	Model 2 (Special Autonomy Funds)	Model 3 (Village & Special Autonomy Funds)	Model 4 (All Variables)
Lagged Village Funds (lag_VF)	-0.0111478* (0.0052983)		-0.011132* (0.0052608)	-0.0116976*** (0.003717)
Lagged Special Autonomy Funds (lag_SAF)		-0.0023392 (0.0029835)	0.0023184 (0.002417)	-0.0014792 (0.0020711)
Human Development Index (HDI)				-0.0345818 (0.0794717)
Open Unemployment Rate (OUR)				-0.0930243 (0.0794717)
Gini Ratio				2.780254 (2.110652)
GDRP				-0.0000702* (0.0000386)
Constant (Intercept)	15.9001*** (0.5688348)	15.06155*** (0.4570019)	0.8803628*** (16.25352)	17.95927*** (5.437075)
Prob > χ^2	0.0592	0.4496	0.1074	0.0000
R-squared (within)	0.1447	0.0233	0.1676	0.2026
N (Obs.)	120	120	120	120

Note: *** p<0.01, ** p<0.05, * p<0.1

Source: Stata output, processed data (2025)

Based on the FEM results in Table 10, Village Funds in the previous year statistically had a significant effect on reducing the number of poor people (p-value = 0.009). The coefficient value of -0.0116976 can be interpreted as meaning that every additional IDR 1 billion in Village Funds allocated in the previous year affects reducing the number of poor people by around 11-12 people in the following year. Meanwhile, the previous Special Autonomy Fund did not have a significant effect (p-value = 0.490), indicating that the fund did not have a delayed observable effect.

Discussion and Policy Implications

Discussion

From the previous discussion, it can be shown that Village Funds have a significant effect on poverty reduction. This result applies both to the reduction in the number of poor people (REM) and the number of poor people (FEM). The consistent significant impact of the Village Fund can be attributed to Oates's (1999) principle of fiscal federalism, which posits that fiscal decentralisation policies can increase efficiency through direct policy intervention that is close to the community. At the village level, Village Funds are utilised for the development of basic infrastructure, including village roads for farming, reservoirs, and clean water, which directly create seasonal employment opportunities and can increase agricultural productivity in villages. Meanwhile, these funds also support human resource capacity at the village level and micro, small, and medium enterprises (MSMEs), directly contributing to increased income for poor households (Mardalena et al., 2023). The village deliberation mechanism also enhances community participation, leading to a more responsive allocation of funds to local needs compared to fiscal instruments transferred through the province. On the other hand, the Special Autonomy Fund has no consistent and significant impact on either model.

These results highlight the direct and lagged effects of the Village Fund on poverty indicators. This lag effect is statistically significant, meaning that fiscal interventions take time to materialize, especially in areas with bureaucratic or logistical challenges, such as in districts in West Papua.

The differences between the REM and FEM model results reveal variations in their influence. The REM estimation measures the average effect between districts at the provincial level, where Village Funds and the Human Development Index (HDI) significantly influence the decline in the poverty rate. This finding aligns with research conducted by Hasanah & Priyadi (2024), which demonstrates that HDI is a key factor in poverty alleviation in Yogyakarta Province.

Although both receive Special Autonomy Funds, there are differences in performance between Papua and West Papua. This means that the success of a policy may not depend solely on the budget amount. In Aceh Province, the Special Autonomy Fund was successful due to its support from Qanun, an independent supervisory agency, and strong integration with national programs (Litami & Lutfi, 2023; Yusri, 2022). Conversely, in West Papua, the allocation of Special Autonomy Funds remains predominantly at the provincial level, with minimal coordination across regional government agencies and a lack of involvement from traditional leaders and the Papuan community in planning (Wasistiono & Sartika, 2022). This has resulted in a situation where large amounts of funds are often not targeted appropriately, especially in mountainous and coastal areas that tend to be isolated.

The opposite is true in the FEM model, which observes the temporal dynamics occurring in each district, where Village Funds remain statistically significant in influencing the ratio of the poor population. In the same model, the Gini ratio has a significant effect on increasing poverty. Meanwhile, Special Autonomy Funds, OUR, and GDRP have no significant effect on either model.

These results, when linked to poverty, one of the primary indicators of development, suggest that regions with fewer impoverished individuals tend to have better development quality. [Suwandi & Warokka \(2013\)](#) explain in their research that increasing the allocation of special funds is a way to support development in underdeveloped regions in Indonesia. However, this argument is not statistically supported by the empirical results of this study. The analysis reveals that, during the period from 2015 to 2024, the allocation of Special Autonomy Funds had no significant impact on poverty alleviation in West Papua Province. However, the amount of these funds exceeded that of the Village Funds. This condition can be attributed to the fact that fiscal policies without adequate planning, governance, and supervision can render these funds ineffective in poverty alleviation efforts ([Kuddy, 2018](#); [Sigit & Kosasih, 2020](#); [Suripatty & Ferdinandus, 2020](#)).

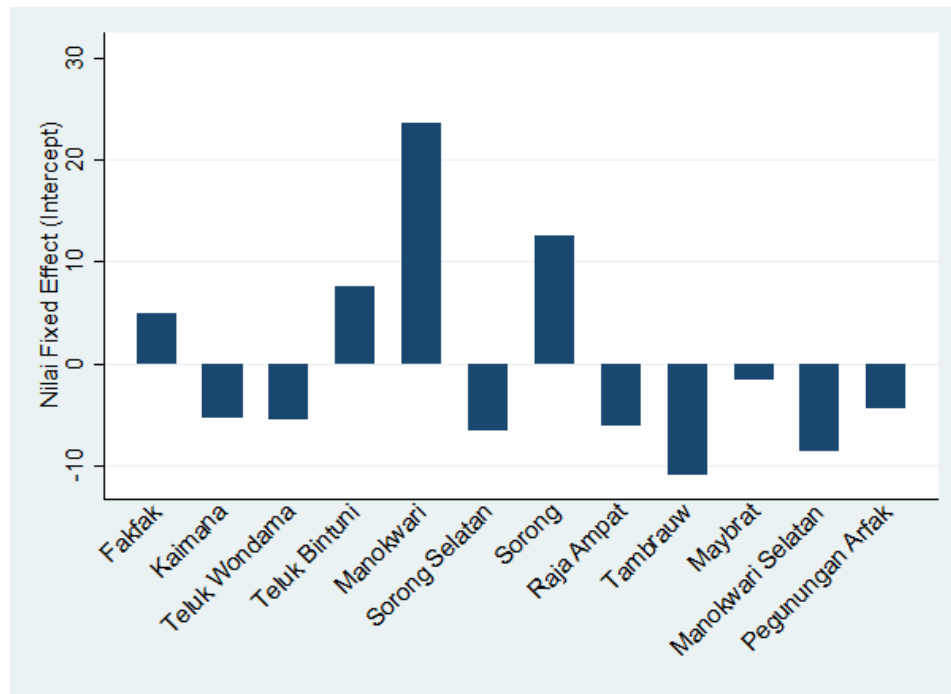


Figure 9. Visualization of Regency-Level Fixed Effects on Poverty Headcount in West Papua Province (2015–2024)

Source: Processed data, 2025

To support and contextualize these findings, Figure 9 shows the fixed effect values for each district using FEM estimates. This model also exhibits characteristics that cannot be directly observed in districts that have an impact on poverty levels. The visualisation indicates that Manokwari and Sorong have a significant influence, which may suggest that local factors are contributing to high poverty levels that are not apparent from the observed variables. These factors take many forms, such as population density, uneven program coverage, or administrative capacity at the local level. On the other hand, Tambrau and South Manokwari have lower fixed effect values. This may mean that the variables included are more representative in explaining poverty variation in these regions or that poverty levels are inherently lower.

The existence of varying results in each district highlights the importance of tailoring strategies to alleviate poverty according to the characteristics of each region (Hasanah & Priyadi, 2024). This means that the same fiscal allocation can lead to varying results, which also depend on the regional context. This condition underscores the need for more regionally oriented policy designs for village development and poverty alleviation initiatives.

Policy Implications

To ensure the effectiveness of Village Funds, a transparent and participatory transfer mechanism is necessary, such as Village Consultative Meetings with a real-time location-based reporting system, which allows for real-time verification. The district government, in particular, also needs to strengthen technical assistance for village officials, especially in areas with low human resource capacity, such as Manokwari and Sorong. To that end, there needs to be integration of the Village Fund with other national programs that directly touch the community, such as PKH and BST, to create synergy in short- and long-term poverty alleviation.

Given the significant lag effect, policymakers must adopt a medium-term perspective mechanism in evaluating the Village Fund. Existing development programs must also be designed to anticipate delays in implementation and absorption, especially in remote areas. This is to ensure that the budget cycle and performance evaluation are in line with the lag effect.

Central and regional governments need to strengthen their planning, monitoring, and accountability mechanisms to ensure that fiscal policies are effective. This is particularly true for the Special Autonomy Fund, which requires evaluation to ensure that allocations are absorbed administratively and have a measurable impact on poverty levels. Transparency, community participation, and strict audit mechanisms must remain important aspects for improving fund management mechanisms, considering previous

studies related to the inefficiency of fiscal transfers in Aceh and Papua ([Azmi et al., 2020](#); [Bakar, Sanusi, & Harsono, 2024](#); [Fadhila, Ubaidullah, & Ahmady, 2023](#); [Kuddy, 2018](#)).

In the long term, village-level development planning in West Papua should be more data-driven and participatory. This initiative aligns with national efforts to strengthen the rural economy, such as the national program Koperasi Desa/Kelurahan Merah Putih. The 30% Village Fund, channelled through well-managed community-based cooperatives, can increase the direct and sustainable economic impact for low-income households.

This also reinforces the importance of formulating poverty alleviation policies that are appropriate to the local context, as demonstrated by the varying fixed effects in each district. The need to adjust interventions to the realities on the ground can increase the effectiveness and accuracy of poverty alleviation strategies in West Papua Province in the long term. It is also worth noting that macroeconomic indicators cannot directly capture this.

The central Government also needs to mandate third-party audits of the use of Special Autonomy Funds each year, along with reports that are easily accessible to the public. In addition, a real-time data monitoring system needs to be developed, including how the Merah Putih Village/Sub-District Cooperative functions as a mechanism for distributing Village Funds directly to the community. This will increase accountability and enable rapid intervention in the event of irregularities or slow absorption.

CONCLUSION

The conclusion that can be drawn from this study is that Village Funds have a significant effect on poverty reduction in West Papua Province. Statistically, Village Funds have been successful in reducing the number of people living in poverty at the provincial level. They have also consistently reduced the number of people living in poverty in all districts over the past decade. This effect not only occurred in the year of allocation but also continued into the following period, indicating a delayed effect. On the other hand, the Special Autonomy Fund also has no significant effect on the regression model, either directly or in terms of lag effects.

Another important factor is the Human Development Index, which statistically has a strong relationship with the decline in the ratio of the poor population. However, this relationship is not apparent when linked to the number of people living in poverty. The opposite is true for the Gini ratio, which has a significant impact on the number of people living in poverty. This suggests that economic inequality at the local level will exacerbate the number of people living in poverty. This finding suggests that inclusive human development may not be successful if income distribution remains unequal.

Based on these conditions, strategies for poverty alleviation in West Papua should be supported by three key aspects: optimising village funds, sustainable investment in human resource development, and efforts to reduce income inequality. In this case, the district

government has a crucial role to play in ensuring that Village Funds are used transparently and participatively, in accordance with the needs of the village community. The provincial Government Then has a role in re-evaluating the Special Autonomy Fund allocation mechanism, so that it can better respond to actual conditions in the field and be based on empirical data.

Further studies from this research are needed to deepen the understanding of the dynamics in local areas by using microdata, which will be very helpful in capturing diversity that aggregate data cannot capture. This approach can improve the accuracy of policies, especially those related to regions with complex geographical, bureaucratic, and cultural challenges, such as West Papua. From an academic perspective, this research can contribute by integrating temporal and spatial dimensions for follow-up analysis of fiscal policy. By including direct and lag effects, this study proves that policy evaluation in remote areas requires a medium-term perspective rather than a purely annual cycle. The findings of this study also reveal the limitations of fiscal federalism theory when applied to institutions with weak capacity, thereby broadening the discourse on fiscal decentralisation in developing countries.

On the social aspect, the implications of the Special Autonomy Fund's ineffectiveness cannot be ignored. The large allocation of the Special Autonomy Fund has failed to reduce poverty, and this can undermine public trust, especially among the poor and vulnerable groups. If this condition continues, it will also have an impact on the central Government's policy perspective, which will shift to become a symbol of structural injustice. Therefore, it is necessary to implement the principles of transparency, accountability, and community participation in the management mechanisms of these two funds. Policy success will be achieved when accompanied by trust and legitimacy, not by the size or absorption of the budget.

REFERENCES

- Arafat, L., Wiwiek Rindayati, & Sahara. (2020). Faktor-Faktor yang Memengaruhi Indeks Pembangunan Manusia di Provinsi Kalimantan Tengah. *JURNAL EKONOMI DAN KEBIJAKAN PEMBANGUNAN*, 7(2), 140–158. <https://doi.org/10.29244/jekp.7.2.2018.140-158>
- Azmi, S., Nuryartono, N., & Binenbaum, E. (2020). Rural Development Policy and Poverty Alleviation: The Case of Village Funds in Aceh Province, Indonesia. *Info Artha*. <https://doi.org/https://doi.org/10.31092/jia.v4i2.735>
- Bakar, A., Sanusi, A., & Harsono. (2024). Can Special Autonomy and Fiscal Decentralization Reduce Inequality in Papua Province? *KnE Social Sciences*. <https://doi.org/10.18502/kss.v9i29.17280>
- BPS. (2024a). *Berita Resmi Statistik: Profil Kemiskinan di Indonesia September 2024*. Jakarta. Retrieved from <https://www.bps.go.id/id/pressrelease/2025/01/15/2401/persentase-penduduk-miskin-september-2024-turun-menjadi-8-57-persen-.html>
- BPS. (2024b). *Berita Resmi Statistik: Profil Kemiskinan Provinsi Papua Barat September 2024*. Manokwari. Retrieved from <https://papuabarat.bps.go.id/id/pressrelease/2025/01/15/981/persentase-penduduk->

- miskin-papua-barat-pada-september-2024-sebesar-21-09-persen--menurun-0-57-persen-poin-terhadap-maret-2024.html
- Dewi, F. G. R. (2020). Pengaruh Akuntabilitas Alokasi Dana Desa, Transparansi, Kebijakan Desa, Partisipasi Masyarakat Terhadap Pembangunan. *Jurnal Ilmu Dan Riset Akuntansi*, 9(5). Retrieved from <https://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/2881>
- DJPK, D. J. P. K. (2024). *Rincian Dana Transfer ke Daerah dan Dana Desa Tahun Anggaran 2015-2024 menurut Provinsi/Kabupaten/Kota*. Jakarta. Retrieved from https://djpk.kemenkeu.go.id/?page_id=41626
- Fadhila, F., Ubaidullah, U., & Ahmady, I. (2023). The Effectiveness of Aceh's Special Autonomy Fund in Allocation to Poverty Alleviation, Education, and Health Sector. *Politika: Jurnal Ilmu Politik*, 14(1), 31–47. <https://doi.org/10.14710/politika.14.1.2023.31-47>
- Faguet, J.-P. (2014). Decentralization and Governance. *World Development*, 53, 2–13. <https://doi.org/10.1016/j.worlddev.2013.01.002>
- Febriandika, N. R., Rahayu, C., & Kumar, R. (2022). The Determinant Factors of Poverty in Eastern Indonesia: Evidence from 12 Provinces. *JEJAK*, 15(2), 283–299. <https://doi.org/10.15294/jejak.v15i2.36675>
- Hafiszrianda, Y., & Iek, M. (2025). Analysis of the Elasticity of Village Funds and Special Autonomy Funds and Additional Infrastructure Funds on Poverty and Human Development Index and Human Development Index in Papua. *Journal of Information Systems Engineering and Management*, 10(8s), 236–254. <https://doi.org/10.52783/jisem.v10i8s.1023>
- Hariyani, H. F., Priyarsono, D. S., & Asmara, A. (2018). Analisis Faktor-Faktor yang Mempengaruhi Korupsi di Kawasan Asia Pasifik. *JURNAL EKONOMI DAN KEBIJAKAN PEMBANGUNAN*, 5(2), 32–44. <https://doi.org/10.29244/jekp.5.2.2016.32-44>
- Hasanah, N. N., & Priyadi, U. (2024). ANALYSIS OF THE FACTORS THAT INFLUENCE POVERTY IN THE DISTRICTS/CITIES OF YOGYAKARTA SPECIAL REGION. *Jurnal Ilmu Ekonomi Dan Pembangunan*, 24(1), 34. <https://doi.org/10.20961/jiep.v24i1.83365>
- Hulu, F., & Rahim, R. (2022). Pengaruh Kepemimpinan Kepala Desa, Kompetensi Aparat Desa dan Partisipasi Masyarakat Terhadap Pengelolaan Dana Desa di Desa Hilina'a Kecamatan Gunungsitoli. *Jurnal Ilmiah Akuntansi Dan Keuangan*, 4(6). <https://doi.org/https://doi.org/10.32670/fairvalue.v4i6.1096>
- Kuddy, A. L. (2018). Partisipasi Masyarakat, Transparansi Anggaran, dan Peran Pengawasan dalam Pengelolaan Dana Otonomi Khusus Sektor Pendidikan di Kabupaten Paniai. *Jurnal Manajemen Dan Bisnis*, 2(1). Retrieved from <https://jurnal.man.feb.uncen.ac.id/index.php/jmb/article/view/15/17>
- Litami, F. P., & Lutfi, A. (2023). Special Autonomy Fund as Implementation of Special Autonomy Policy Aceh. *Return : Study of Management, Economic and Bussines*, 2(12), 1199–1207. <https://doi.org/10.57096/return.v2i12.183>
- Mardalena, M., Adji, A., Rohima, S., Harunurrasyid, H., & Nida, R. (2023). The welfare impact of village fund allocation in Indonesia: The comparative of Java and Non-Java. *Optimum: Jurnal Ekonomi Dan Pembangunan*, 13(2), 207–218. <https://doi.org/10.12928/optimum.v13i2.8668>
- Metanda, L. A. H., & Oktora, S. I. (2022). Analysis of Net Enumeration Rate of Senior High School Using Fixed-Effect Clustered-Robust Standard Error Model. *Indonesian Journal of Statistics and Its Applications*, 6(2), 270–286. <https://doi.org/10.29244/ijsa.v6i2p270-286>

- Musgrave, R. A., & Musgrave, P. B. (1989). *Public Finance in Theory and Practice* (5th Ed). Singapore: McGraw–Hill Book Company.
- Oates, W. E. (1999). An Essay on Fiscal Federalism. *Journal of Economic Literature*, 37(3), 1120–1149. <https://doi.org/10.1257/jel.37.3.1120>
- Oktaviana, D., Primandhana, W. P., & Wahed, M. (2021). Analisis Pengaruh Pertumbuhan Ekonomi, Upah Minimum Kabupaten, dan Pengangguran, Terhadap Kemiskinan di Kabupaten Madiun. *Syntax Idea*, 3(5), 1034. <https://doi.org/10.36418/syntax-idea.v3i5.1183>
- Pattinasarany, G. D. V., Herudin, I., Irtanton, P. B., & Iswanto, L. (2021). *Opsi Keberlanjutan Dana Otonomi Khusus 2022-2041: Menuju Tanah Papua yang Sejahtera dan Mandiri*. Jakarta Pusat. Retrieved from <https://kc.pusdalibang.papua.go.id/repositori/opsi-keberlanjutan-dana-otonomi-khusus-tahun-2022-2041-menuju-tanah-papua-yang-sejahtera>
- Pentury, M. A. (2023). The determinants of poverty in the West Papua province. *Jurnal Ekonomi & Studi Pembangunan*, 24(2), 285–296. <https://doi.org/10.18196/jesp.v24i2.18428>
- Santi, E. (2019). *Pola Sebaran Spasial dan Determinan Kemiskinan Seluruh Kabupaten/Kota di Indonesia Serta Strategi Pengentasannya* (Institut Pertanian Bogor). Institut Pertanian Bogor, Bogor. Retrieved from <https://repository.ipb.ac.id/handle/123456789/101333>
- Saputri, M. A., Millah, N., Falah, R. N., & Dewi, S. A. (2025). *Strategi Pengentasan Kemiskinan: Tantangan dan Peluang dalam Mewujudkan SDGs di Indonesia*. <https://doi.org/10.19105/ejpis.v1i.19213>
- Sebayang, G. S. (2023). Analysis of The Allocation of Special Autonomy Funds in Infrastructure, Education, and Health as The Areas With The Largest Allocation to Poverty Levels in Aceh. *Return : Study of Management, Economic and Bussines*, 2(8), 795–804. <https://doi.org/10.57096/return.v2i8.132>
- Sigit, T. A., & Kosasih, A. (2020). Pengaruh Dana Desa terhadap Kemiskinan: Studi Tingkat Kabupaten/Kota di Indonesia. *Indonesian Treasury Review*, 5(2). <https://doi.org/https://doi.org/10.33105/itrev.v5i2.170>
- Suripatty, R., & Ferdinandus, A. Y. (2020). Transparansi Penyaluran dan Pengelolaan Dana Desa Terhadap Pemanfaatan Pemberdayaan Masyarakat Papua di Kabupaten Sorong Provinsi Papua Barat. *Jurnal Ilmiah Ekonomi Dan Bisnis*, 13(2).
- Suwandi, & Warokka, A. (2013). Fiscal Decentralization and Special Local Autonomy: Evidence from an Emerging Market. *The Journal of Southeast Asian Research*, 1–14. <https://doi.org/10.5171/2013.554057>
- Wasistiono, S., & Sartika, I. (2022). Model Evaluation of Papua and West Papua Province's Special Autonomous. *Bestuurskunde: Journal of Governmental Studies*, 2(1), 73–88. <https://doi.org/10.53013/bestuurskunde.2.1.73-88>
- Widiprana, R. B. (2022). Analisis Pengaruh Dana Otonomi Khusus dan Pendapatan Asli Daerah terhadap Produk Domestik Regional Bruto pada Kabupaten dan Kota di Provinsi Papua Barat. *Lensa Ekonomi*, 16(02), 200. <https://doi.org/10.30862/lensa.v16i02.246>
- World Bank. (2023). *Indonesia Economic Prospects, December 2023: Climate Action for Development*. World Bank, Washington, DC. <https://doi.org/10.1596/40729>

Yusri, A. (2022). Does Government Expenditure Affect Poverty, Health, and Education? Evidence from Aceh, Indonesia. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, 6(1), 1–20. <https://doi.org/10.36574/jpp.v6i1.249>