

## EDUCATION LEVEL, SPECIAL AUTONOMY FUNDS, AND ECONOMIC GROWTH AS DETERMINANTS OF POVERTY IN REGENCIES/ MUNICIPALITIES OF ACEH PROVINCE

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### ARTICLE INFORMATION

### ABSTRACT

**Keywords:**  
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*This research investigates how education levels, Special Autonomy Funds, and economic growth influence poverty in the districts and cities of Aceh Province. The study uses panel data from 2019 to 2024, obtained from Statistics Indonesia (BPS) and the Directorate General of Fiscal Balance (DJPk), and applies panel regression analysis. Among the models tested, the Random Effects Model (REM) was identified as the most suitable approach. The results reveal that education expenditure and special autonomy funds significantly reduce poverty, whereas economic growth shows a positive but statistically insignificant effect. Combined analysis indicates that education levels, special autonomy funds, and economic growth together have a significant positive impact on poverty levels in Aceh's districts and cities. Based on these findings, it is recommended that the Aceh government enhance investments in education and improve education quality through effective use of special autonomy funds. Such measures are expected to foster economic growth and contribute to the reduction of poverty across the province.*

### 1. INTRODUCTION

According to Syahputra (2017), the goal of national development is to promote long-term economic growth while simultaneously improving citizens' quality of life and strengthening social unity. One of the essential steps in realizing economic development is strengthening regional economies, as they play a critical role in determining a nation's overall success. A country's ability to achieve national development largely depends on the government's capacity to formulate effective policies aimed at reducing poverty. Poverty remains a persistent challenge in Indonesia and other developing countries, representing a complex issue that encompasses economic, social, and cultural

dimensions.

Poverty represents a significant challenge that must be addressed by a nation in its efforts to overcome various internal issues. Handalani (2019) notes that poverty in Indonesia has persisted for a long time. Poverty is often used as an indicator of the strength or weakness of a country's economy (Munandar et al., 2020). The persistence of poverty, particularly in Indonesia, constitutes a central task for both central and regional governments, as it hampers national development and contributes to rising poverty levels across provinces, especially in Aceh.

Aceh is one of the provinces in Indonesia with

the most significant levels of poverty. On a national scale, it ranks sixth, after Papua, West Papua, East Nusa Tenggara, Maluku, and Gorontalo. The number of poor people in Aceh reaches approximately 819,000, making it the highest in Sumatra (Sakinah, 2022). The high poverty rate in Aceh presents a considerable challenge for local governments in improving community welfare. Local governments are granted broad authority to design and implement policies and development programs tailored to regional needs. However, they must possess a deeper understanding of the needs of their communities. Despite this authority, local governments continue to face obstacles in policy implementation, highlighting the need for evaluation to assess the extent to which their policies effectively reduce poverty in the region.

Table 1 below illustrates the changes in the number of people living in poverty in Aceh over the six-year period from 2019 to 2024.

**Table 1. Poverty Rate in Aceh Province  
2019-2024**

<b>Years</b>	<b>Poverty Rate (%)</b>
2019	15.32
2020	14.99
2021	15.33
2022	14.64
2023	14.45
2024	14.23

Source: BPS Aceh Province, (2025)

Table 1 presents the percentage of the poor population in Aceh Province. In 2023, the poverty rate declined from 14.45% to 14.23% in 2024. Nevertheless, poverty remains a persistent issue in the province. One of the main drivers of poverty is unemployment, as many individuals are still unable to secure jobs or access adequate employment opportunities. To address this challenge, the government needs to design strategic plans that focus on regional economic development. Several factors contribute to the persistence of poverty,

including inflation, education levels, special autonomy funds, and economic growth.

Among these, education is a critical determinant. The level of education significantly affects poverty, as low educational attainment limits skills and knowledge, thereby reducing access to better job opportunities. Education enables individuals to develop intelligence, moral values, positive character, and skills that are beneficial both personally and socially. Human resources in the field of education serve as a key factor in producing a highly competitive generation capable of working collaboratively to enhance national welfare and facing global competition in the future (Edward & Azhar, 2019).

Education, in essence, is a conscious effort undertaken by individuals to enhance knowledge, develop skills, and broaden perspectives. It also serves as a process of empowering learners, positioning them both as subjects and objects in the pursuit of a better quality of life (Anggraini, 2020). Given its crucial role in improving the quality of human resources, educational development encompasses both formal and non-formal education. Quality education produces competent individuals who are capable of adapting to the demands of changing times.

The socio-economic background of society also influences the effectiveness of compulsory education programs. Beyond its importance in securing employment—since many companies set high educational requirements for prospective employees education plays a key role in preventing poverty (Anggraini, 2020). In situations of unemployment, the skills and knowledge acquired through education can serve as essential assets for initiating self-employment, thereby contributing to economic improvement and reducing poverty risks.

Furthermore, the level of education in Aceh Province has fluctuated over the past six years, from 2019 to 2024, as shown in Table 2 below.

**Table 2. Education Levels in Aceh Province 2019-2024**

Years	Education Levels (%)
2019	9.18
2020	9.33
2021	9.37
2022	9.44
2023	9.55
2024	12.27

Source: BPS Aceh Province, (2025)

Table 2 indicates that the lowest level of education occurred in 2019 at 9.18 percent, while the highest level was recorded in 2024 at 9.55 percent. According to Anggraini (2020), education has a significant positive effect on poverty, with a coefficient of 0.021981, a t-statistic of 0.052685, and a probability value of 0.0428 (below 5%). In addition, the minimum wage in Lampung Province was found to significantly raise poverty levels, showing a coefficient of 0.062153, a t-statistic of 0.204403, and a probability value of 0.0398 (less than 5%). When analyzed together, both education and the minimum wage have a jointly significant positive influence on poverty, indicating that education is an important factor affecting poverty rates.

Poverty may also influence the utilization of special autonomy funds, as regions with high poverty levels often face difficulties in maximizing the potential benefits of these funds. The primary purpose of allocating special autonomy funds is to improve community welfare and foster regional development. Although such funds can contribute to development, suboptimal or uneven utilization may limit their positive impact on poverty reduction. One of the key challenges lies in the weak oversight of the management of special autonomy funds allocated to autonomous regions. Moreover, the general population has limited awareness of the

existence and purpose of these funds, and the issue has not been widely disseminated to the public (LIPI, 2019).

Aceh Province is recognized as a region with special autonomy (Sakinah, 2022). This autonomy is operationalized through the allocation of regional revenues to the provincial government, including specific funds designated for special autonomy purposes. According to Sakinah (2022), the Aceh Special Autonomy Fund functions as a source of government revenue allocated to finance multiple development programs, including infrastructure development and upkeep, community economic empowerment, poverty alleviation, and funding for education, social services, and healthcare. In addition, these funds are also utilized to support development programs aimed at exercising Aceh's special privileges. The Special Autonomy Fund in Aceh Province has been distributed over a 20-year period, from 2008 to 2028, with allocations determined based on the General Allocation Fund (DAU) (Taurina et al., 2019).

Furthermore, the special autonomy funds in Aceh Province have fluctuated over the past six years, from 2019 to 2024, as shown in Table 3 below.

**Table 3. Special Autonomy Funds in Aceh Province 2019-2024**

Years	Special Autonomy Funds
2019	8.357.470.000.000
2020	7.555.280.000.000
2021	7.555.830.000.000
2022	7.560.000.000.000
2023	3.960.000.000.000
2024	10.321.392.824.000

Source: DJPK Ministry of Finance, (2025)

Table 3 illustrates the annual fluctuations in special autonomy funds in Aceh Province. A decline in realization was recorded in 2024, amounting to IDR 10,321,392,824,000, while the highest realization occurred in 2019 at IDR 8,357,470,000,000.

Findings from Sakinah (2022) indicate that, in the long run, zakat and special autonomy funds have a negative and significant effect on reducing poverty. This

implies that a decrease in zakat and special autonomy funds will lead to an increase in poverty, and vice versa. In contrast, the Human Development Index (HDI) was found to have no significant effect on poverty reduction in Aceh Province. The equitable distribution of special autonomy funds is expected to stimulate stronger economic growth, as policies tailored to local needs can generate more effective economic opportunities for the community.

As noted by Kuznets in Alfredo (2021), economic growth refers to an economy's long-term ability to generate the goods and services needed by its population, taking into account the current technological level and the country's institutional or ideological context. Economic growth serves as the foundation for sustainable development, as improvements in public welfare can be achieved by stimulating growth through the enhancement of public facilities, including education, healthcare, infrastructure, the provision of subsidized housing, environmental quality improvement, and the strengthening of the agricultural sector. Therefore, the higher the economic growth of a country, the greater the potential for improving the welfare of its people in line with such growth.

Furthermore, economic growth in Aceh Province has fluctuated over the past six years, from 2019 to 2024, as shown in Table 4 below.

**Table 4.** Economic Growth in Aceh Province 2019-2024

Years	Economic Growth (%)
2019	4.14
2020	-0.37
2021	2.81
2022	4.21
2023	4.23
2024	4.6

Source: BPS Aceh Province, (2025)

Table 4 illustrates that economic growth in Aceh Province fluctuated over the past six years, from 2019 to 2024. The highest growth was recorded

in 2024, while the lowest occurred in 2020.

According to Novianto (2015), economic growth, the Human Development Index (HDI), and inflation contribute to reducing poverty levels, while unemployment is associated with an increase in poverty. The F-test results further reveal that economic growth, HDI, inflation, and unemployment jointly (simultaneously) influence poverty levels. Therefore, both growth and poverty are issues that must be addressed by the central as well as regional governments.

Drawing from this context, the study seeks to investigate the influence of these four variables on poverty and to assess their combined effect on poverty levels in Aceh Province. Consequently, the research is titled *“The Effect of Education Level, Special Autonomy Funds, and Economic Growth on Poverty in Regencies/Municipalities of Aceh Province.”*

## 2. LITERATURE REVIEW

### Education

Education is a fundamental necessity for all individuals, as an educated society is better equipped to liberate itself from poverty (Susanto & Pangesti, 2019). In addition, education functions as a crucial component of human capital, allowing individuals to develop their competencies through formal learning as well as practical skill acquisition. These capabilities increase opportunities for employment, which is particularly crucial in today's highly competitive labor market, thereby contributing to the reduction of unemployment in a given region (Mouren et al., 2022).

### Special Autonomy Funds

Regional autonomy refers to the authority granted to the inhabitants of a region to manage and administer their own affairs in line with existing laws and regulations. The presence of regional autonomy grants authority to local governments to administer their

territories for broader developmental purposes (Kadafi & Murtala, 2020).

Special autonomy, in particular, refers to the authority granted to specific regions to design and manage local interests based on their rights, aspirations, and initiatives. It is implemented by proportionally delegating authority to regional governments, meaning that such delegation is accompanied by a fair arrangement in the allocation and utilization of national resources (Kiki Endah, 2016).

### Economic Growth

Economic growth is the outcome generated by various economic sectors, reflecting the progress or setbacks achieved within a specific period (Arsyad, 2010). Higher economic growth can enhance economic capacity, as measured by Gross Domestic Product (GDP), thereby reducing poverty levels. Nevertheless, disparities in income can limit the extent to which economic growth successfully reduces poverty (Dewanto et al., 2014).

Sukirno (2013) defines economic growth as the broadening of economic activities that leads to a higher output of goods and services within a society. Similarly, Sriwahyuni (2020) highlights that economic growth occurs when increasing production of goods and services drives a rise in income levels.

### Poverty

Poverty is one of the key obstacles to human resource development, as it prevents individuals from fulfilling their basic needs such as adequate clothing, food, and shelter. Poverty is generally defined as the inability to meet the minimum standard of basic needs, both food and non-food (Andiny & Mandasari, 2017). Similarly, Aryani et al. (2019) describe poverty as a condition in which individuals lack sufficient resources to achieve a

decent standard of living, encompassing economic, social, psychological, and spiritual dimensions.

### Conceptual Framework

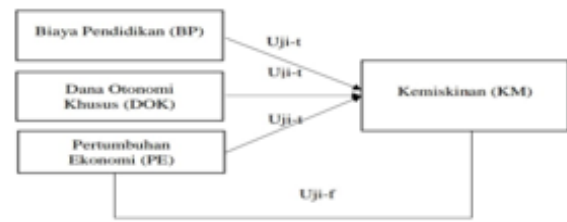


Figure 1. Conceptual Framework

### Hypothesis

The hypothesis of this study are formulated as follows:

- H<sub>1</sub>: Education rate is hypothesized to have an effect on poverty in districts/municipalities in Aceh Province.
- H<sub>2</sub>: Special autonomy funds are hypothesized to have an effect on poverty in districts/municipalities in Aceh Province.
- H<sub>3</sub>: Economic growth is hypothesized to have an effect on poverty in districts/municipalities in Aceh Province.
- H<sub>4</sub>: Education expenditure, special autonomy funds, and economic growth are jointly hypothesized to have an effect on poverty in districts/municipalities in Aceh Province.

## 3. RESEARCH METHODS

### Data Types and Sources

The object of this study is poverty, which serves as the dependent variable, while education level, special autonomy funds, and economic growth are designated as the independent variables. The research was conducted in districts/municipalities within Aceh Province covering the period 2019–2023. The data for this study were collected from secondary sources, including the Aceh Provincial Statistics Agency (BPS) available at <https://aceh.bps.go.id>, and the Ministry of Finance (Kemenkeu), accessible via

<https://djp.kemenkeu.go.id/kanwil/aceh/id/>.

## Data Collection

The method employed for data collection was a literature review, which involves obtaining relevant information through records, scholarly works, official documents, and other sources closely related to the scope of this study.

## Data Analysis Methods

In this research, panel data regression is applied to investigate how education spending, special autonomy funds, and economic growth affect poverty. The use of panel data, which merges cross-sectional observations with time-series information, enriches the dataset and enhances the robustness and depth of the empirical findings (Gujarati & Porter, 2009). Within panel data methodology, three alternative model specifications are generally employed, namely the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM) (Widaryono, 2017).

The general panel data regression equation is specified as follows:

$$Y_{it} = \beta_0 + \beta_1 x_{1it} + \beta_2 \ln x_{2it} + e_{it}$$

Accordingly, the econometric model adopted in this study can be expressed as:

$$KM_{it} = \beta_0 + \beta_1 LNBP_{it} + \beta_2 LNDOK_{it} + \beta_3 PE_{it} + e_{it}$$

Where:

KM = Poverty Rate

$\beta_0$  = Constant/Intercept

$\beta_1 - \beta_3$  = Regression Coefficient

LNBP = Education Costs (Rupiah)

LNDOK = Special Autonomy Funds (Rupiah)

PE = Economic Growth (Percent)

$i$  = 23 districts/cities Aceh Province

$t$  = Years 2019-2024

$e$  = Error Terms

## 1. Common Effect Model

The Common Effect Model (CEM) integrates cross-sectional and time-series data, and its estimation is carried out using the Ordinary Least Squares (OLS) technique (Widarjono, 2017). However, this model does not account for variations across individuals or over time, as it assumes a constant intercept that does not vary either randomly or systematically. The general specification of the Common Effect Model, as outlined by Wooldridge (2002), Baltagi (2005), and Gujarati and Porter (2009), is expressed as follows:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it}$$

## 2. Fixed Effect Model

The Fixed Effect Model (FEM) is a panel data approach in which the intercept varies across individual units (cross-sections), while the slope coefficients remain constant over time (Gujarati & Porter, 2009). The general specification of the Fixed Effect Model can be formulated as follows:

$$Y_{ia} = \alpha_i + \beta X_{it} + \mu_{it}$$

## 3. Random Effect Model

Random Effect Model estimates panel data under the assumption that the residual component captures both cross-sectional and time-series variation. In this framework, the error term is assumed to be correlated with neither the independent variables nor the individual-specific effects, thereby allowing for random variation across entities and time (Gujarati, 2012). A key requirement of the REM is that the number of cross-sectional units must exceed the number of explanatory variables employed in the analysis. The general specification of the REM can be expressed as follows:

$$Y_{it} = \alpha + \beta X_{it} + u_i + \varepsilon_{it}$$

or

$$Y_{it} = \alpha + \beta X_{it} + v_{it}$$

## Panel Data Regression Model

## Selection of Panel Data Models

### a. Chow Test

According to Widarjono (2017), the Chow test is applied to assess whether the Common Effect Model (CEM) or the Fixed Effect Model (FEM) is more appropriate for panel data analysis. In this research, the test is performed using EViews software. The hypotheses for the Chow test are formulated as follows:

$$H_0 : \text{Common Effect Model}$$

$$H_1 : \text{Fixed Effect Model}$$

The null hypothesis ( $H_0$ ) is rejected if the p-value falls below the predetermined significance level ( $\alpha$ ), whereas it is retained when the p-value exceeds  $\alpha$ . For this study, the significance threshold is established at 5%.

### b. Hausman Test

The Hausman test is employed to compare the Fixed Effect Model (FEM) with the Random Effect Model (REM) in order to determine the most appropriate specification for panel data regression (Gujarati & Porter, 2009). The test was conducted using the EViews software package. The hypotheses applied in the Hausman test are formulated as follows:

$$H_0 : \text{random effect model}$$

$$H_1 : \text{fixed effect model}$$

The null hypothesis ( $H_0$ ) is rejected if the p-value is less than the significance level ( $\alpha$ ). Conversely,  $H_0$  is accepted when the p-value exceeds  $\alpha$ . In this study, the significance level is set at 5%.

### c. Lagrange Multiplier

The Lagrange Multiplier (LM) test is applied to determine whether the Common Effect Model (CEM) or the Random Effect Model (REM) is more appropriate. This test is based on the chi-square distribution, with degrees of freedom equal to the number of independent

$$H_0 : \text{Random Effect Model}$$

$$H_1 : \text{Common Effect Model}$$

variables. The LM test in this study was conducted using the Breusch–Pagan approach, with the hypotheses formulated as follows:

When the cross-sectional probability value is below 0.05, the null hypothesis ( $H_0$ ) is retained, suggesting that the Random Effect Model (REM) is the suitable specification. On the other hand, if the probability value exceeds 0.05, the alternative hypothesis ( $H_1$ ) is supported, indicating that the Common Effect Model (CEM) is the more appropriate choice.

## 4. RESULTS AND DISCUSSION

To identify the most suitable model for panel data regression, the Chow test, Hausman test, and Lagrange Multiplier (LM) test were carried out, comparing the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The outcomes of these analyses are presented as follows:

**Table 5.** Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	218.380921	(22,112)	0.0000
Cross-section Chi-square	521.892395	22	0.0000

Source : Data Processed, 2025

Table 5 presents the results of the Redundant Fixed Effect Test, which shows that the probability value of the Chi-Square is less than the 5% significance level ( $0.0000 < 0.05$ ). This indicates that the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model (CEM). Since FEM is selected based on

this test, the next step is to proceed with the Hausman test.

**Table 6. Hausmant Test Results**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.483759	3	0.6860

Source : Data Processed, 2025

Table 6 displays the outcomes of the Hausman Test, showing a Chi-Square probability value of 0.6860, which exceeds the 5% significance threshold ( $0.6860 > 0.05$ ). This indicates that the Random Effect Model (REM) is more suitable than the Fixed Effect Model (FEM). Consequently, the analysis proceeded with the Lagrange Multiplier (LM) test.

**Table 7. Lagrange Multiplier Test Results**

Test Hypothesis	s-section	Time	Both
	322.0246 (0.0000)	2.116714 (0.1457)	324.1413 (0.0000)

Source : Data Processed, 2025

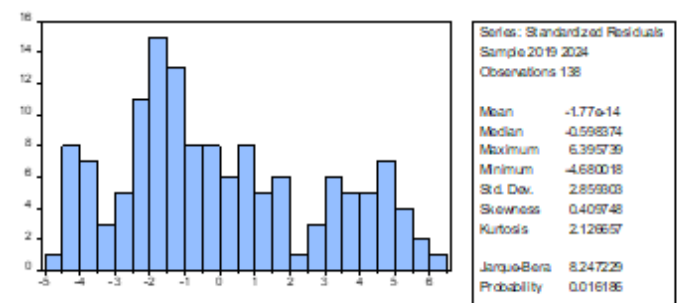
Table 7 shows the results of the Lagrange Multiplier Test, where the probability value for Both is below the 5% significance level ( $0.0000 < 0.05$ ). This finding suggests that the Random Effect Model (REM) is more suitable, indicating a better fit than the Common Effect Model (CEM). Accordingly, the REM is determined to be the most appropriate model for this study.

Once the most suitable model has been selected, the next step is to evaluate whether the chosen model meets the criteria of a robust regression framework. This involves examining whether the estimated parameters are accurate, unbiased, and capable of properly representing the actual conditions. Evaluating the model involves examining its goodness of fit, since the main purpose of regression analysis is to account for as much variation in the dependent variable as possible through the included explanatory variables. To confirm the model's validity, it is essential to check

that it meets the classical linear regression assumptions, as described by Gujarati and Porter (2009).

### Normality Test Results

The purpose of the normality test is to determine whether the residuals of a regression model are distributed normally. The assessment is based on the probability value: data are considered normally distributed if the probability exceeds the 5% significance level (0.05), whereas a probability below 0.05 indicates that the data do not follow a normal distribution. The outcomes of the normality test conducted using EViews are presented as follows:



Source : Data Processed, 2025

**Figure 2. Normality Test Results**

Figure 2 illustrates that the normality test yielded a Jarque–Bera statistic of 8.247 and a probability value of 0.016, which is below the 5% significance threshold (0.05). Therefore, it can be inferred that the model's residuals are not normally distributed. The lack of normality may be attributed to the combined nature of the data, which integrates both cross-sectional and time-series observations.

### Multicollinearity Test Results

To detect the presence of linear relationships among the independent variables, a correlation test was conducted. A correlation value greater than 0.90 ( $> 0.90$ ) indicates potential multicollinearity within the model. The correlation between LNBP and LNDOK was found to be  $-0.288$ , which is below the 0.80 threshold, suggesting that the model is free from multicollinearity. Similarly, the correlation between LNBP and PE was 0.142, also lower than 0.80, indicating no evidence of

multicollinearity. Furthermore, the correlation between LNDOK and PE was  $-0.288$ , which is likewise below  $0.80$ , confirming the absence of multicollinearity in the model.

### Heteroskedasticity Test Results

In this study, the probability values of all variables were found to be above the  $0.05$  threshold. Specifically, the probability of education expenditure was  $0.809$ , the probability of special autonomy funds was  $0.45$ , and the probability of economic growth was  $0.186$ . These results indicate that none of the variables exhibit symptoms of heteroskedasticity.

### Panel Data Analysis

For this study, the Random Effect Model was chosen as the most suitable specification. The subsequent section presents the regression results based on this selected model.

**Table 8.** Random Effect Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	129.4681	14.36700	9.011495	0.0000
LNP	-11.88791	1.409717	-8.432839	0.0000
LNDOK	-0.453853	0.161427	-2.811511	0.0057
PE	0.040108	0.024455	1.640065	0.1033

Source : Data Processed, 2025

Based on the results presented in Table 8, the regression equation can be specified as follows:

$$KM_{it} = 129,468 - 11,888LNP_{it} - 0,454LNDOK_{it} + 0,040PE_{it}$$

The regression results indicate that the constant value is  $129.47\%$ , implying that when the variables of education expenditure, special autonomy funds, and economic growth in districts/municipalities of Aceh Province remain constant, the poverty rate across the 23 districts/municipalities is projected to remain at  $129.47\%$ . Both the constant and the overall model are statistically significant at the  $1\%$  level, as

indicated by a probability value of  $0.0000$ , which is below  $0.01$ .

The coefficient of education expenditure is estimated at  $-11.89\%$ , suggesting that a  $1\%$  increase in education expenditure in Aceh's districts/municipalities leads to a  $11.89\%$  reduction in poverty, holding special autonomy funds and economic growth constant. In Aceh Province, spending on education has a significant impact in reducing poverty, showing a negative relationship. This finding is consistent with the initial hypothesis, which posited that education expenditure exerts a negative and significant impact.

These results highlight the critical role of education in alleviating poverty, as it provides individuals with the knowledge and skills necessary to enhance their productivity and competitiveness in the labor market. Improved educational attainment enables individuals to access better employment opportunities and achieve higher levels of welfare, thereby contributing to poverty reduction (Afina, 2020).

These results align with the findings of Yuliasih (2018), who reported that education has a significant negative effect on poverty in West Kalimantan Province, and with Putri Yaumul Pahlawan and Ratna (2020), who similarly found that education significantly reduces poverty.

The coefficient of Special Autonomy Funds is estimated at  $-0.45\%$ , indicating that a  $1\%$  increase in Special Autonomy Funds allocated to districts/municipalities in Aceh Province reduces poverty levels by  $0.45\%$ , assuming education expenditure and economic growth remain constant. The analysis indicates that Special Autonomy Funds significantly reduce poverty in Aceh Province, suggesting that higher allocations of these funds help lower poverty levels across its districts and municipalities.

The results align with the proposed hypothesis, suggesting that Special Autonomy Funds play a role in reducing poverty. These funds are distributed with the objective of enhancing community prosperity at the regional level. According to Law No. 11 of 2006 concerning the Governance of Aceh, Special Autonomy Funds serve as one of the province's revenue sources and are designated for purposes such as infrastructure development and maintenance, community economic empowerment, poverty reduction, and financing education, social services, and healthcare. Enhancing infrastructure supports economic activity, which in turn increases household income. Therefore, the Aceh government's use of these funds aims not only to stimulate economic growth but also to alleviate poverty (Sakinah, 2022).

The results of this study align with Sakinah (2022), who found that Special Autonomy Funds significantly reduce poverty. In contrast, they differ from the findings of Iqbal Putra and Ratna (2021), who reported that these funds have a significant positive effect on poverty levels.. The regression results show an economic growth coefficient of -0.041%, implying that a 1% rise in economic growth across districts and municipalities in Aceh Province is associated with a 0.041% increase in poverty, assuming that education expenditure and Special Autonomy Funds remain unchanged.

In this research, the economic growth variable is found to influence poverty in districts and municipalities of Aceh positively, though the effect is not statistically significant. This outcome suggests that improvements in economic growth have not translated into meaningful poverty reduction within the province. Such evidence runs counter to the initial assumption, which anticipated a significant inverse relationship between economic growth and

poverty in Aceh.

Although Aceh has experienced economic growth annually, the evidence indicates that this growth has not been sufficient to significantly reduce poverty. One of the main reasons is that the growth has not been inclusive; the benefits of development have been concentrated among certain groups and have not reached the poorer segments of the population equitably. Furthermore, the expanding economic sectors tend to be less labor-intensive, thereby failing to generate substantial employment opportunities that could directly improve the welfare of the poor.

The quality of human capital also remains a critical challenge in Aceh, particularly in terms of education and workforce skills. As a result, poor households often face difficulties in participating in more productive economic activities. In addition, the province's heavy reliance on Special Autonomy Funds (Otsus) and local government spending indicates that Aceh's economy has yet to establish sufficient resilience through the real sector.

Other structural issues, such as high regional development disparities, limited investment in productive sectors such as agriculture and micro, small, and medium enterprises (MSMEs), as well as weak governance of poverty alleviation programs, further exacerbate the situation. Consequently, while economic growth is recorded statistically, its impact on reducing poverty remains very limited.

### **Coefficient of Determination $R^2$**

The value of the Adjusted R-square in this study is 0.4392. This indicates that the variables of education level, special autonomy funds, and economic growth collectively explain approximately 43.92% of the variation in poverty across districts/municipalities in Aceh Province. The remaining 56.08% of the variation is attributed to factors outside the scope of this model.

## 5. CONCLUSION AND SUGGESTIONS

### Conclusion

From the results of the analysis, the following conclusions are derived:

1. When considered individually, education levels exert a significant negative impact on poverty in Aceh's districts and municipalities, indicating that higher educational attainment helps lower poverty across the province.
2. When examined individually, Special Autonomy Funds have a significant negative effect on poverty in the districts and municipalities of Aceh Province. This indicates that higher allocations of special autonomy funds are associated with a decrease in poverty.
3. Partially, economic growth shows a positive but insignificant effect on poverty in districts/municipalities of Aceh Province. This finding suggests that, despite economic expansion, poverty reduction has not been effectively achieved. This condition is largely attributed to uneven growth, where the benefits of development are disproportionately captured by middle- and upper-income groups, leaving low-income households unaffected.
4. Simultaneously, education level, special autonomy funds, and economic growth collectively demonstrate a significant relationship with poverty in districts/municipalities of Aceh Province. However, the joint effect indicates that improvements in these variables do not necessarily lead to poverty alleviation, particularly when growth and resource distribution remain unequal.

### Suggestion

Based on the above conclusions, several recommendations are proposed as follows:

1. The regional government of Aceh Province should place greater emphasis on improving access to and the quality of education, particularly in rural and underdeveloped areas. Equitable and high-quality education will enhance the skills of the population, thereby increasing competitiveness in the labor market and gradually reducing poverty levels.
2. Special Autonomy Funds (Otsus) should be allocated to programs that directly address the basic needs of society, such as education, healthcare, rural infrastructure, and community-based economic empowerment. Strengthening oversight and ensuring transparency in the management of these funds are also crucial to ensure their impact is both tangible and sustainable.
3. Local governments are encouraged to foster more inclusive economic growth, namely growth that creates employment opportunities and raises the incomes of low-income households. Greater support should be directed toward community-based productive sectors such as agriculture, fisheries, and micro, small, and medium enterprises (MSMEs) to ensure that the benefits of economic growth are distributed more evenly.
4. It is recommended that future studies include other factors, such as unemployment, income inequality, and infrastructure, to gain a more complete insight into the determinants of poverty in Aceh Province.

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