



DID THE SPECIAL AUTONOMY FUND TRANSFER AFFECT THE INTER-REGIONAL ECONOMIC EQUALITY IN ACEH?

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Abstract

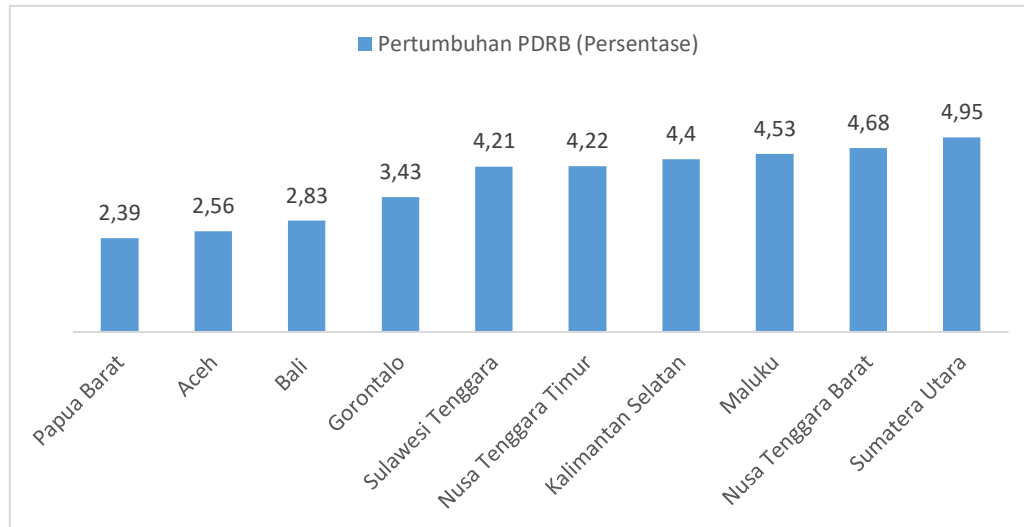
This study aims to analyze the convergence of per capita income of districts/cities in Aceh Province after the transfer of special autonomy funds that has taken place during the period 2008 to 2022. The method used is sigma convergence with dispersion analysis, coefficient of variation and beta convergence with the Arellano-Bond General Moment Method estimation model approach or First Difference GMM (FD-GMM). The results of the sigma convergence analysis revealed that there was a convergent trend throughout 2008 to 2019 even though in the Covid-19 period the 2019-2022 period slowly showed divergence. Meanwhile, based on beta convergence analysis, it shows that there is no GDP-per capita convergence, but the divergence shown by the value of the GDP-per capita coefficient of the initial year which is marked / positive slope and the variable of special autonomy funds shows negative and significant effects. These results indicate that the special autonomy fund has not contributed significantly to equity in Aceh Province. This is because budget management is still not good so that equity in Aceh Province is still constrained. Evaluation of the use of special autonomy funds must be carried out so that the use and management of these funds can be realized on target in accordance with the target considering that the transfer period of Aceh special autonomy funds will end in 2027.

Keywords: *Special Autonomy Fund, Income Disparities, Sigma and Beta Convergency.*

INTRODUCTION

Aceh has been one of the provinces receiving special autonomy fund transfers since 2008. The allocation of the Special Autonomy Fund is a transfer fund received by the Government of Aceh sourced from the Central Government to run its government system so as to provide stimulus for the Aceh economy (Kamarni et al., 2022). Based on Undang-undang No 11 of 2006 concerning the Government of Aceh contained in Article 183 paragraph (1) that the Special Autonomy Fund is government revenue Aceh is aimed at financing development, especially infrastructure development and maintenance, empowerment people's economy, poverty alleviation, and funding educational, social, and health. Vulnerable to the allocation of this special fund based on Article 183 paragraph (2) that the Special Autonomy Fund lasts for a period of time 20 years, where in the first year until By the fifteenth year the magnitude is equal to 2% of the ceiling National General Allocation Fund (DAU) and sixteenth year up to the twentieth year the magnitude is equal to 1% national DAU ceiling (Badan Akuntabilitas Keuangan Negara, 2020). The main objective of the special autonomy fund is to increase fiscal capacity in accelerating Aceh's post-conflict economic development. However, the financial resources of the Special Autonomy Fund have not been maximally managed effectively and efficiently by the Aceh government, so

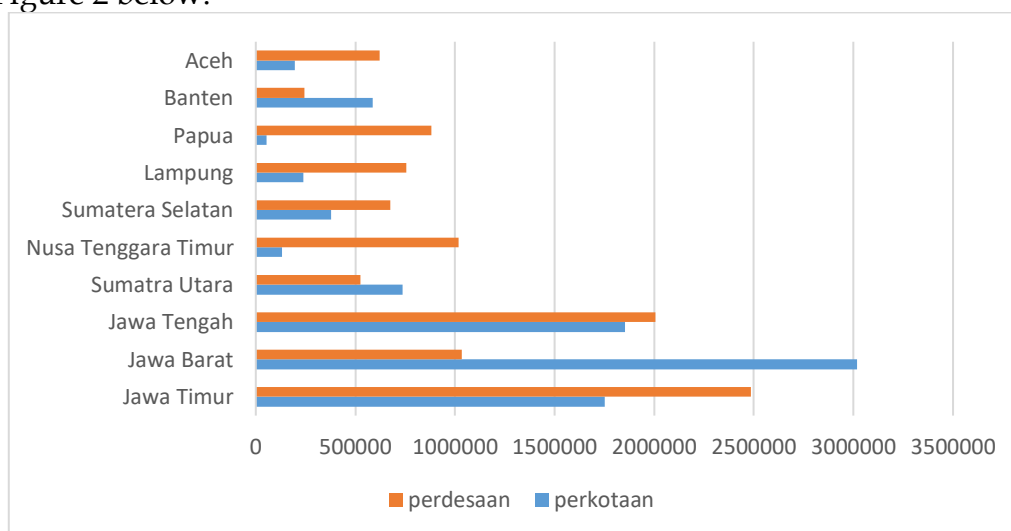
they have not had an even impact on the priority sectors targeted (Basri & Nabiha, 2014). Several reports have mentioned - the profile of Aceh's main economic variables is currently still facing problems, low growth, high poverty rates and inequality between districts / cities in Aceh.



Source: Badan Pusat Statistik (2021)

Figure 1. Comparison Of The Lowest Economic Growth In 10 Provinces In Indonesia In 2021

The Central Statistics Agency (BPS) recorded Aceh's economic growth in the second quarter of 2021 at 2.56 percent. This growth is the lowest compared to other provinces in Sumatra and the second lowest nationally. The main cause of low economic growth in Aceh from the sectoral side is because it is still very dependent on the primary sector, namely agriculture and mining and the lack of the processing industry sector. In addition, Aceh is included in the category with the poorest people. This can be seen from Figure 2 below.

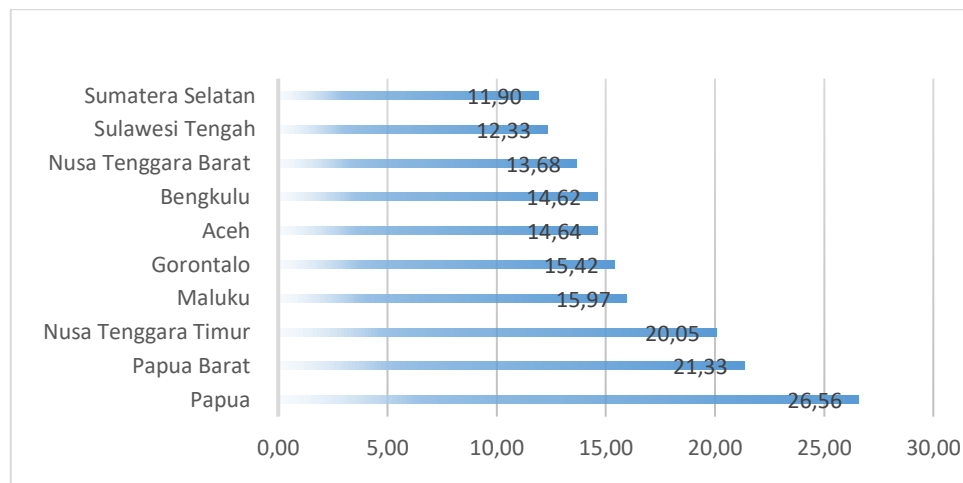


Source: Badan Pusat Statistik (2022)

Figure 2. Comparison of the Highest Poverty Level in 10 provinces in Indonesia In 2022



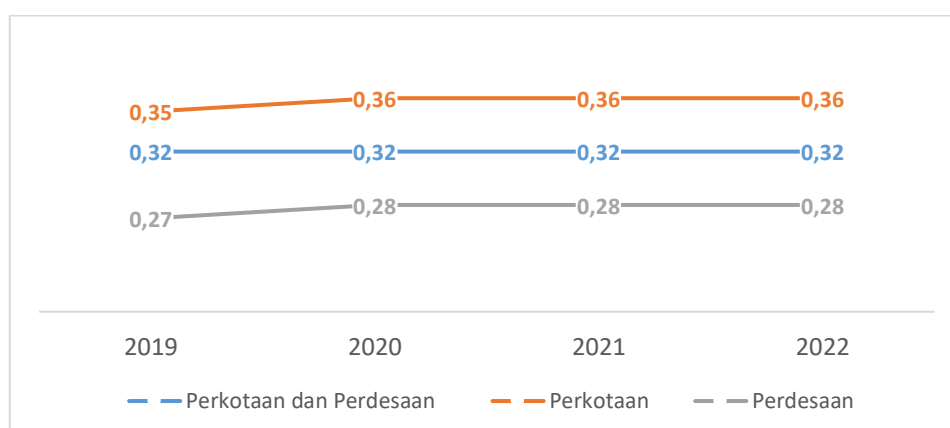
In terms of the number of poor people, Aceh occupies the 10th position with the category of poor people still dominated in rural areas with a total of 621,520 people, while in urban areas the population of Aceh amounts to 196,950 people. However, in terms of percentage of poor people, Aceh Province ranks 6th highest as described in Figure 3.



Source: Badan Pusat Statistik (2022)

Figure 3. Percentage Comparison of 10 Regions with the Poorest People in Indonesia

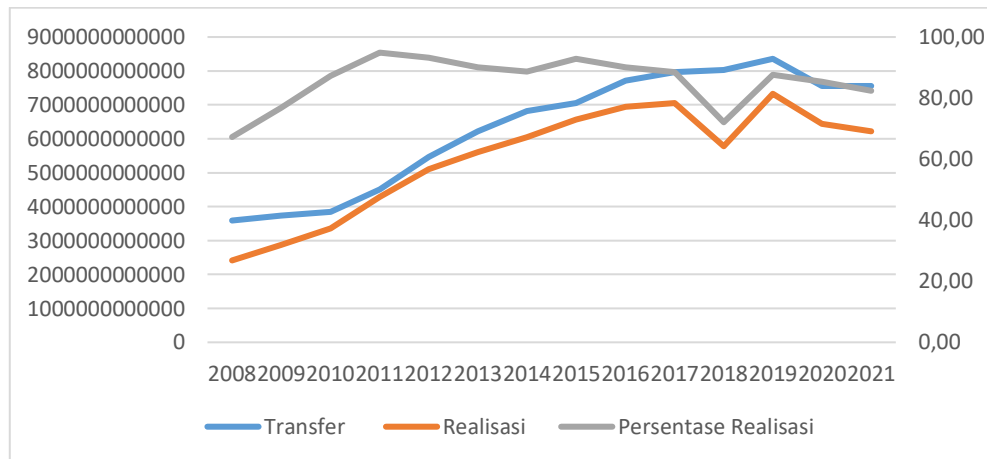
In addition, the issue of economic inequality between regions in Aceh is still obvious. As shown in Figure 4 where the level of inequality in Acehnese society widened in March 2021. This is reflected in Aceh's Gini ratio which reached 0.324, an increase compared to September 2020 of 0.319. In detail, the Gini ratio in urban Aceh increased from 0.355 in September 2020 to 0.362 in March 2021. Meanwhile, Aceh's rural Gini ratio fell from 0.283 in September 2020 to 0.275 in March 2021.



Source: Badan Pusat Statistik (2022)

Figure 4. Aceh Province Gini Index

The economic disparity among districts and cities in Aceh Province is a significant issue that affects the region. This is contradictory to the budget support of special autonomy funds that have been allocated to accelerate post-conflict economic development, but in fact equitable distribution of economic development between regions is still a problem. When viewed from Figure 5, the total special autonomy funds in Aceh that have been allocated from 2008 to 2021 are Rp 88.4 trillion (2% of DAUN) with a realization of Rp 72 trillion and an average realization percentage of 85.49 percent.



Source: Badan Pusat Statistik (2022)

Figure 5. Performance of Aceh Special Autonomy Fund

The amount of this special autonomy fund is a challenge for Aceh Province in the future. This is because starting in 2023, Aceh will only receive 1 percent of Special Autonomy Funds (Otsus), previously in 2008-2022 of 2 percent from the national General Allocation Fund (DAU) platform. This means that if in 2022 Aceh receives Rp 7.560 trillion in special autonomy funds, then in 2023 it will only be Rp 3.9 trillion or half. This is a challenge to Aceh's economic development where the Special Autonomy Fund will end permanently in 2027. The challenges in the utilization of the Dana Otsus in Aceh encompass issues related to effectiveness, sustainability, distribution, and its impact on anti-corruption efforts. Addressing these challenges will be crucial for ensuring the fund's optimal contribution to the development and welfare of Aceh. In fact, so far the management of special autonomy funds in Aceh is considered to still face a number of problems such as the distribution of portions of the provincial government budget with districts, budget management that is still not good, and the impact on welfare and poverty reduction is not yet significant (Putra & Amran, 2023). This fact is in contrast to Keynesian theory which states that government spending has a significant influence on economic growth. According to this theory, in recessionary conditions or when investment and consumption decline, the government can play an important role in increasing aggregate spending through fiscal policy. By increasing government spending, whether through investment in infrastructure development or social programs, governments can stimulate aggregate demand, boost economic growth, and create jobs (Muhammed, 2014).



Several studies have analyzed this problem and highlighted its impact on poverty and economic growth. Research conducted by Imilda et al (2022) revealed, inequality economic development between districts/ cities of Aceh Province calculated using Entropy Thell shows widening inequality. Next, a study on Murtala (2022) revealed that the income disparity in Aceh Province contributes to increased poverty levels. The study identified the per capita income distribution across the 23 districts and cities in Aceh, with some areas exhibiting more equitable income distribution than others. Another analysis on Meliza & Murtala (2020) emphasized the economic growth disparity, with Kota Banda Aceh experiencing the highest economic growth rate. However, disparities in income and unemployment levels were observed, particularly in Kabupaten Aceh Utara and Kota Lhokseumawe. Furthermore, a study on Irmiana & Rahmadani (2022) highlighted the impact of economic growth disparity on poverty in the western and southern regions of Aceh Province. The study identified areas such as Kabupaten Aceh Jaya, Kabupaten Nagan Raya, and Kabupaten Aceh Barat Daya as experiencing significant economic growth disparities. Moreover, research on Hadi (2017) focused on analyzing the causes of economic disparity among districts and cities in Aceh Province, emphasizing the need for government intervention to address the inequality.

Based on these findings, the economic disparity among districts and cities in Aceh Province has been a subject of various studies, while government budget can contribute to reducing economic disparity in Aceh, there are still challenges related to the uneven distribution of funds and the need for targeted policies to address disparities in economic growth rates across districts and cities. However, several previous studies have not explicitly explained the effect and how the acceleration of the realization of special autonomy funds on the distribution of economic income between districts / cities in Aceh. Addressing this issue, this study aims to analyze the role of special autonomy funds on economic equality between districts/ cities in Aceh.

METHOD

The scope of research taken is macro, namely 23 districts and cities in Aceh Province. This study aims to analyze whether there is a convergence of sigma and beta per capita income between districts/cities in Aceh Province after special autonomy funds are received with a time interval from 2008 to 2022. In this study, the data used are secondary data, namely Special Autonomy Fund Realization data sourced from the Regional Planning and Development Agency (Bappeda) of Aceh Province and Per Capita Income data sourced from the Central Statistics Agency (BPS) of Aceh Province as well as other sources needed in this study.

The data analysis models used in this study are gross convergence (sigma convergence) and beta convergence (conditional convergence). First, sigma convergence analysis is a time series analysis to observe the convergence of observation variables carried out by calculating the coefficient of variation (Lei & Yao, 2008). First, sigma convergence analysis.

$$CV = \frac{\sqrt{\sum y_i - \bar{y}/n}}{\bar{y}} \dots \dots (1)$$

Second, convergent analysis uses beta convergence with the dynamic panel data model approach the use of estimation Arellano-Bond Generalized Method of Moments (GMM) (Arellano & Bond, 1991). Where beta convergence equation is

$$PDRB_{pit} = \alpha + \beta_1 PDRB_{pit-1} + \beta_2 SAF_{it} + e_{it} \dots \dots (3)$$

where $PDRB_{pit}$ is the GDP Regional per capita of the District/City during the current period and $PDRB_{pit-1}$ is the GDP Regional per capita of the previous year's Regency /City. SAF is Special Autonomy Fund. Next the symbol of α is the Constant, i is the Region, t is the Year, β_1 to β_2 are the regression coefficients and e_{it} is the error term. Then for the goodness of the model specification, there is the Arellano-Bond Test to test the assumption of autocorrelation and the Sargan Test to test the validity of the instrument of the variables.

Furthermore, according to Barro & Sala-i-Martin (1990) that convergence occurs when $\beta_1 < 0$. To find out the speed of convergence (speed of convergence) is indicated by the value of beta with the formula.

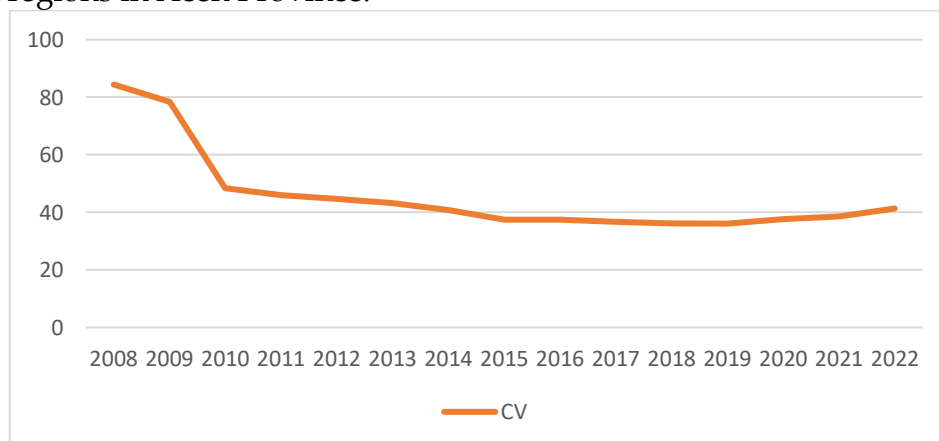
$$\lambda \frac{-\log(1 + \beta_1)}{t} \dots \dots (4)$$

After obtaining the speed of convergence rate, it is necessary to know the half-life which is the length of time needed to cover half of the inequality that occurs with the formula.

$$\frac{-\log(0.5)}{\lambda} \dots \dots (5)$$

FINDINGS

The estimation results of sigma convergence show that there is sigma convergence between districts (23 regions) in Aceh Province for the period after the special autonomy fund transfer (2008-2022). This is known by looking at the value of the coefficient of variation as shown in Figure 6, where the graph shows the fluctuating movement of the value of the coefficient of variation with a downward trend indicating that there is economic equality or convergence of per capita income between regions in Aceh Province.



Source: Data analyzed (2023)

Figure 6. Value of GDP-per capita Variation Coefficient of District-City in Aceh Province After Special Autonomy Fund Transfer (2008-2022)



However, during the Covid-19 pandemic, throughout 2019-2022 slowly the value of the coefficient of variation showed an increase or the economy between regions in Aceh Province slowly showed divergent indications. Furthermore, the estimation results of the GMM First-Difference Arellano-Bond Panel model in Table 1 show the value of the positive coefficient on the variable GDP per capita in the form of the first difference indicates that based on the analysis of conditional beta convergence during the period after the transfer of special autonomy funds in Aceh, namely 2008-2022, the regional economy in Aceh Province tends to show divergent or increasingly unequal conditions. In addition, the special autonomy fund variable showed a negative coefficient value with a significant effect based on a p-value of 0.00 or below 0.05. Although it shows a significant effect and a negative coefficient value, this result also indicates that the special autonomy fund in Aceh Province has not had a significant influence on per capita income in Aceh Province.

Table 1. Results of GMM First- Difference Arellano-Bond Panel Data Model Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PDRBp(-1)	0.991892	0.000	6132.125	0.000
SAF	-0.000016	0.000	-88.923	0.000
J-statistic	22.73586	Instrument rank		24
Prob(J-statistic)	0.416771			

(Source: Data analyzed, 2023)

Next, the results of the model specification to determine the validity of the instrumental use of variables with the Sargan test is described in Table 1. Table 1 shows that the p-value is 0.417 above the significance level used 5 percent (0.05) then the null hypothesis Accepted which means that the overidentifying restriction state in the estimator of the model estimate is valid. Then Table 2 shows the results of the Arellano-Bond Test conducted to determine the correlation between one residual component and another residual component in the dynamic panel data model.

Tabel 2. Uji Arellano-Bond Serial Correlation

Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	NA	-1.312E+15	NA	NA
AR(2)	-1.388232	-1.837E+14	1.3232E+14	0.1651

(Source: Data analyzed, 2023)

Table 2 describes the p-value in the second order of 0.17 or above 0.05. Using a significance level of 5 percent, the null hypothesis is accepted meaning that it has no autocorrelation for the second-order residual first difference component, which means that the estimates used are consistent.

DISCUSSION

In general, the transfer of special autonomy funds in Aceh Province has not had an impact on the distribution of per capita income between districts / cities in Aceh Province. This result has also been confirmed by several previous findings that during the transfer period of the special autonomy fund, the interregional economy in Aceh Province showed divergent tendencies (Zulham et al., 2015; Hadi, 2017; Abrar et al., 2018; Mediyanti, 2019 ; Meliza & Murtala, 2020 ; Mahdawi & Rustam, 2022; Imilda et al., 2022). Even the results of the analysis show that the effect of special autonomy funds on per capita income is negative. These results also apply similarly to the findings of Safwadi (2020) and Arispen et al.(2021) but the effect of special autonomy funds on the Human Development Index (HDI). Another finding, Ikhsan & Pribadi (2015) revealed that special autonomy funds have not been able to alleviate poverty. Furthermore, Machfud et al. (2021) finding that the support of special autonomy funds has not even been able to increase the financial independence of local governments in Aceh.

Some of the contributing factors are that the use of special autonomy funds has not been effective due to indications of political interests of the ruling group, the realization of special autonomy funds that are not transparent so that they are full of corruption risks (Sustikarini, 2019) (Khalis, 2020) (Akbar et al., 2021) (Yuranda & Husna, 2022) (Fadhila & Ahmady, 2023). Based on these results, there are several considerations that can affect the impact of the special autonomy fund on economic equity in Aceh which involve effective policy implementation, transparency in the use of funds, community participation in the development process, and periodic monitoring and evaluation.

CONCLUSION

Aceh Province has obtained Special Autonomy (Otsus) fund transfers provided by the central government as a result of a Memorandum of Understanding between the Government of Indonesia and the Free Aceh Movement (GAM) since 2008. Economic problems, especially the problem of income disparity between districts / cities are still a problem in Aceh Province. Based on sigma convergence by looking at the distribution of the value of the coefficient of variation in per capita income trendingly, it shows that there is economic equality between districts / cities in Aceh Province, although in the last three years there has been a slight divergence due to the impact of Covid-19. In addition, the results of beta convergence analysis with the GMM First-Difference Arellano-Bond Panel Data Model Estimation approach show that there is actually a divergence or inequality between districts / cities in Aceh Province. The variable special autonomy fund also showed only a significant negative effect on per capita income. This result concludes that the Government of Aceh has not been able to manage special autonomy funds appropriately and efficiently in developing the economy between regions evenly.

Evaluation of the use of special autonomy funds must be more rigorous, this is towards the end of 2027 so that the use and management of these funds can be realized on target in accordance with the targets of the plans that have been made, especially



the use of special autonomy funds must be in accordance with the proper uses such as infrastructure development, people's economy, poverty alleviation, education, social and health. So that the realization of the use of appropriate special autonomy funds can stimulate the economy of Aceh Province through increasing interest in investing and wider availability of labor which ultimately has an impact on improving the economy of Aceh Province. Furthermore, the use of special autonomy funds must also be more concentrated in underdeveloped areas, where development must be increased through programs that are able to support and improve the community's economy.

Further research related to this research needs to be done, this is because research on this topic needs to be examined more deeply, especially on other variables that affect the convergence of per capita income between regions in Aceh Province that have not been contained in this study.

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