

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

Glena Shafira Sebayang

Faculty of Business and Economics, University of Indonesia, Indonesia
glenashafiras@gmail.com

ABSTRACT

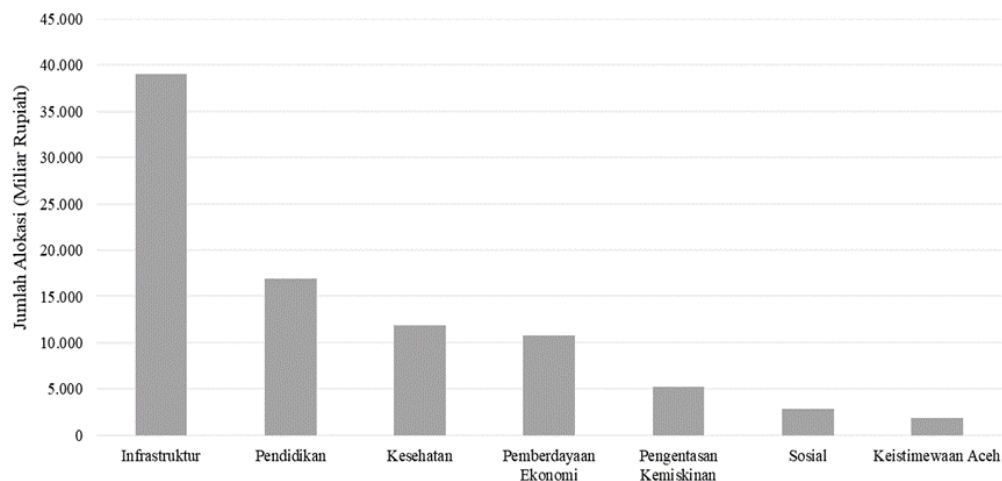
Aceh's poverty rate is still high enough to make Aceh the fifth poorest province in Indonesia. This is a concern because Aceh received additional transfer funds in the form of Special Autonomy Funds which are used for seven areas, namely, infrastructure maintenance and development, people's economic empowerment, poverty alleviation, education, social, health, and Aceh. However, of these seven areas, the areas that received the largest allocation were infrastructure, education, and health, while the other fields tended to get relatively small allocations. Nevertheless, infrastructure, education, and health continue to have an influence on poverty. For this reason, this study aims to determine how the influence of infrastructure, education, and health as fields that have a large allocation of funds in the Special Autonomy Fund on poverty levels. This study used panel data from 22 districts/cities in Aceh in the 2014-2021 research period. This study used regression panel fixed effect model data to see the estimated results. The results of this study show that the allocation of Special Autonomy Fund in infrastructure, education, and health has not significantly affected poverty rates in Aceh.

***Keywords:** Allocation of Special Autonomy Fund for infrastructure; allocation of the Special Autonomy Fund for education; allocation of the Special Autonomy Fund for health; and poverty rates*

INTRODUCTION

Aceh's poverty rate is still quite alarming. Aceh is the fifth poorest province in Indonesia. The number of poor people in Aceh reached 15.9% or around 850.26 thousand people in 2021 (BPS, 2022). This is a concern because Aceh is one of the 5 regions that have special rights. The rights obtained by Aceh are specifically in the form of special autonomy through Law Number 11 of 2006 concerning the Government of Aceh. In the implementation of special autonomy, Aceh also received a special fiscal enactment, where Aceh received additional transfer funds in the form of Special Autonomy Funds (Kemenkeu, 2019). The Special Autonomy Fund has a considerable contribution in regional revenues, both at the provincial and district/city levels (Handra et al., 2018). This should have had more impact on the welfare of people in Aceh. However, during the period of implementation of this policy, the poverty rate in Aceh was still quite high (Hasta Budiratna & Riatu M. Qibthiyah, 2020; Setiawan et al., 2020).

In the implementation of the Special Autonomy Fund, this fund is intended for development in seven areas. The field of development in question includes the field of infrastructure maintenance and development, the field of people's economic empowerment, the field of poverty alleviation, the field of education, the field of social, the field of health, and the field of privileges of Aceh. However, it can be seen from figure 1 that the areas that receive the largest allocation are infrastructure, education, and health. Other fields tend to receive relatively small allocations, even including poverty alleviation allocations.



Graphs 1
Total Allocation of Special Autonomy Funds per Field
for the Period 2008-2021 (Billion Rupiah)

Source: Special Autonomy Fund Realization Report (Reworked)

Nevertheless, infrastructure, education, and health continue to have an influence on poverty. The view of the relationship between infrastructure and poverty is illustrated by the research of Tamam (2013), according to them the relationship between infrastructure investment and poverty alleviation can be seen directly (direct) and indirect (indirect). Directly, the relationship between infrastructure and poverty starts from infrastructure investment (intervention areas) that affect productivity in areas affected by infrastructure development (areas of influence). Then, with better infrastructure development, it will create jobs and better wages, so that with more decent wages and jobs can reduce poverty (areas of concern). Furthermore, the relationship between infrastructure and poverty indirectly starts from infrastructure investment which will affect economic growth, then economic growth will affect real income or real consumption of the poor, and the end result is real income or real consumption will reduce poverty.

Then, education became one of the sectors that was closely correlated with poverty. Education plays an important role as a means to improve their abilities and develop their capacity in a sustainable manner. By having a good education, the productivity of the poor will increase, so they have the ability to compete and obtain opportunities for greater opportunities in economic and social activities. People with a good education will have basic knowledge and skills will have the option to have a better and decent job with a better salary/income as well. The better income will help the poor in improving their quality of life which will improve their welfare. Therefore, education is one of the productive investments because it involves human capital that can increase productivity (Todaro & Smith, 2012) to have a better life in the future, so that poor people can get out of poverty conditions.

The impact of health on poverty is as great as any other sector. Health is a prerequisite to be able to carry out daily activities. The impact of health on poverty can be felt if the need for proper health services can be met. A person or household that is not healthy enough to work because it is difficult to get access to health care, will cause their productivity to be low. According to (Todaro & Smith, 2012) that someone who is healthier will get a higher income. This is because with good health, a person will be more productive so that the income obtained will be better than people with low productivity. Higher incomes will help the poor to get out of poverty. Therefore, it is important to provide adequate health services to help people to get out and avoid poverty.

From this, we learn that the three largest areas of the special autonomy fund have an influence on poverty, both directly and indirectly. For this reason, it is interesting to know how

the influence of infrastructure, education, and health as fields that have a large allocation of funds in the Special Autonomy Fund on poverty levels.

Research related to the allocation per field in the Special Autonomy Fund has never been conducted with the object of Aceh research. However, there is research that has been done in other regions, namely Papua. Research by (Kharisma et al., 2020) looks at the impact of the allocation of the Special Autonomy Fund for education and health on the Human Development Index in Papua Province. They found that the allocation of the Special Autonomy Fund in education had an insignificant negative influence on HDI in Papua Province in 2014-2017. This is not in accordance with the theory that education will improve the quality of oneself. This is because education development does not have a significant magnitude when compared to the complexity of education problems in Papua. Furthermore, they also found that the allocation of health areas had a significant positive influence on HDI. For these two results, they suggested evaluating the distribution method and utilization of the Special Autonomy Fund as well as increasing the human resource capacity of local government officials in order to be able to distribute funds even better.

Then, another study by (Tamberan et al., 2020) which looked at the impact of the allocation of Special Autonomy Funds in the fields of education, health, infrastructure, and community economic empowerment on regional economic inequality, both directly and indirectly through HDI in Papua in 2010-2018. The results showed that the Special Autonomy Fund variables in education and health had a significant positive effect on HDI, while the Special Autonomy Fund variables in infrastructure and community economic empowerment did not have a significant effect on HDI. Furthermore, the Special Autonomy Fund for infrastructure directly has a significant negative effect on regional economic inequality. Meanwhile, the Special Autonomy Fund in the field of people's economic empowerment does not have a significant effect on regional economic inequality. Indirectly through HDI, the variable of special autonomy funds in the fields of education, health, infrastructure, and community economic empowerment does not have a significant effect on regional economic inequality.

RESEARCH METHOD

This research analysis uses inferential analysis with a quantitative approach with the aim of measuring the indicators of research variables so that an objective picture of these variables is obtained. The type of data used is secondary data obtained indirectly or sourced from third parties, where the data in this study is sourced from data publications from the Central Statistics Agency (BPS), Aceh Audit Board (BPKA) (BPK RI, 2018), and the Indonesia Database for Policy and Economic Research (INDODAPOER). The data obtained are 22 districts/cities in Aceh in the 2014-2017 and 2019-2021 research periods, in 2018 they were excluded from the research time period because in 2018 Qanun No.10 of 2016 was enacted which allocations for the district/city level were managed by the provincial level.

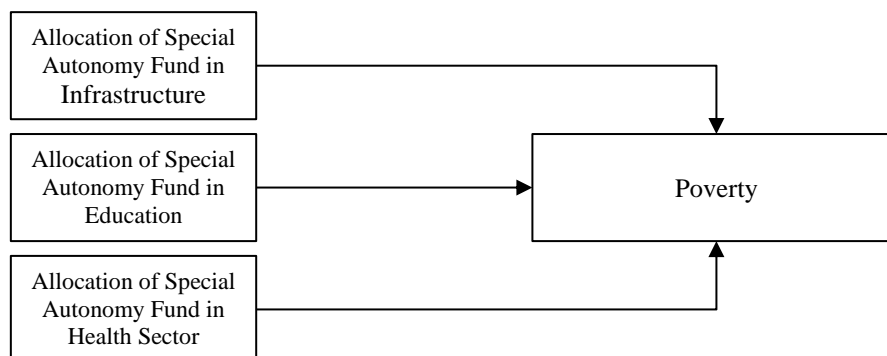


Figure 1 Mindset Scheme

The following is an operational definition of the variables used for inferential analysis in this study:

1. Independent Variable

- a) Allocation in the infrastructure sector is funds allocated to finance infrastructure development. The data used is the realization of the allocation of infrastructure. The unit used is the natural logarithm (\ln_infras).
- b) Allocation in the field of education is funds allocated to finance funding for educational activities. The data used is the realization of the allocation of the education sector. The unit used is the natural logarithm (\ln_didik).
- c) Allocation in the health sector is funds allocated to finance the health sector. The data used is the realization of the allocation of infrastructure. The unit used is the natural logarithm (\ln_sehat).

2. Dependent Variable

- a) The poverty rate is the number of poor people who have incomes below the poverty line. The unit used is the natural logarithm (\ln_pov).

To see the effect of the allocation of the Special Autonomy Fund in the fields of infrastructure, education, and health on poverty, the equation model used in this study is as follows:

$$\ln(pov)_{it} = \alpha_0 + \beta_1 \ln(infras)_{it-1} + \beta_2 \ln(didik)_{it-1} + \beta_3 \ln(sehat)_{it-1} + e_{it}$$

Where:

- \ln_pov : Percentage of poor people (%)
 \ln_infras : Allocation of infrastructure (Rp)
 \ln_didik : Allocation of education (Rp)
 \ln_sehat : Health sector allocation (Rp)
 α_0 : Intersep
 β_0 : Variable constants
 i : Districts/Municipalities
 t : time period (Year)
 ϵ_{it} : *error term*

Inferential analysis in this study uses panel data with a *fixed effect model approach*. Fixed effect estimation models are used to control for unobserved variables and overcome variables that do not change over time, which can cause bias in the estimation results due to differences in regional characteristics (districts / cities) (Gujarati, 2016). The analysis in this study was carried out by processing data using data processing software in the form of Stata 16.0.

Then, the variables of the allocation of the Special Autonomy Fund in the infrastructure sector (infrastructure), the allocation of the Special Autonomy Fund in the field of education (education), and the allocation of the Special Autonomy Fund in the health sector (health) use *lag time* (inaction model). This is because a policy is difficult to see results at the same time as the implementation of policy, especially in budget policy. This study only used *the first lag time* due to data limitations.

RESULT AND DISCUSSION

The estimation results in this study can be seen in table 2 as follows:

Table 1 Estimated Results

Variable	Coefficient	Std. Error	t	P> t
L1. ln_infras	-0,0103677	0,0165194	-0,63	0,537
L1. ln_didik	0,0196665	0,0163593	1,20	0,243
L1. ln_sehat	0,0074166	0,0131072	0,57	0,577
_cons	10,00122	0,3880572	25,77	0,000

Source: Panel Data Regression Results in Stata Software, 2023

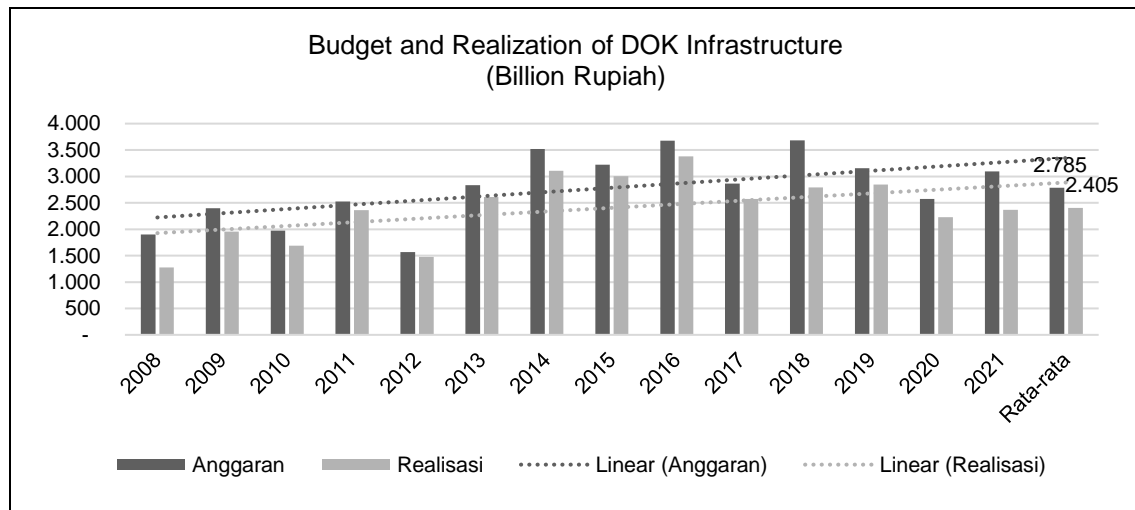
Table 1 aims to see the effect of the three allocation areas with the largest allocation from the Special Autonomy Fund on poverty levels in Aceh. The estimation results show that the allocation of Special Autonomy Funds in the fields of infrastructure, education, and health in the first lag has not significantly affected the poverty rate in Aceh.

Discussion

Allocation of Special Autonomy Fund in Infrastructure to Poverty

The infrastructure sector is the area with the largest allocation from the Special Autonomy Fund throughout the implementation of the 2008-2021 period. During this period, funds allocated to infrastructure have an increasing budget trend. In 2008, the infrastructure budget fund was IDR 1.9 trillion with a realization of IDR 1.2 trillion, then in 2021, the infrastructure budget reached IDR 3.09 trillion with a realization of IDR 2.4 trillion in 2021. The increase in allocation to infrastructure is in line with the increase in the Special Autonomy Fund.

Although the budget and realization in the infrastructure sector have an increasing trend, the portion of allocation in the infrastructure sector actually experienced a downward trend despite increasing fluctuations in the period. The portion of fund allocation for infrastructure at the beginning of the Special Autonomy Fund policy period reached 52.8%, then decreased to 38.06% of the total realization of the Special Autonomy Fund.



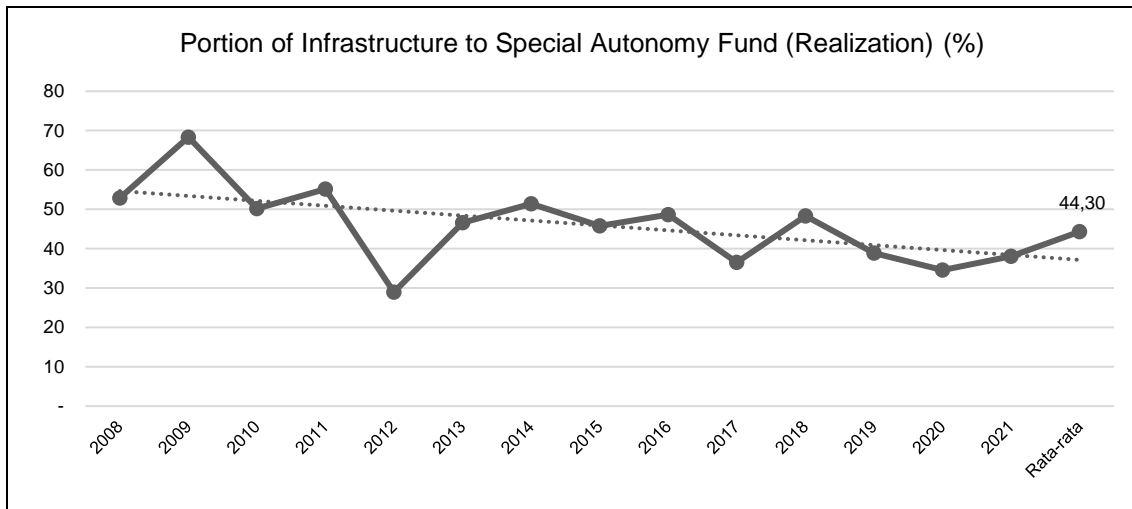


Figure 2 Budget Development and Realization in the Infrastructure Sector along with the Portion of Infrastructure Allocation to the Special Autonomy Fund

Source: (BPKA, 2021) (Reworked)

In the policy period, activity programs in the infrastructure sector were used for the construction and maintenance of 16 types of infrastructure (Bappeda, 2020). The largest allocation is used for road and bridge construction and rehabilitation activities with a value of Rp 28.74 trillion or around 80% of the total realization of the infrastructure sector. This indicates that the construction and rehabilitation of roads and bridges in Aceh is predominantly sourced from the receipt of the Aceh Special Autonomy Fund. The second largest allocation was distributed for irrigation development with an amount of around 5.54% of the allocation of funds in the infrastructure sector, followed by flood control construction by 5.12%, and the construction of sea dikes/jetties by 2.92%.

Most of the funds in the infrastructure sector are used for the construction of public infrastructure such as roads and bridges, transportation facilities, natural disaster management infrastructure, and others. This public infrastructure development indirectly affects the poverty rate, where infrastructure development will affect through economic growth. Adequate infrastructure will create better economic growth, so that poverty alleviation programs will also run better (Tamam & Rahma, 2013). This means that infrastructure has transmission to influence poverty, but it takes longer to see the impact of infrastructure development on poverty.

Allocation of Special Autonomy Fund in Education to Poverty

Education was the second largest allocation from the Special Autonomy Fund in the 2008-2021 period. In terms of budget and realization as well as the portion in the education sector, it seems to have an increasing trend, although it experienced a sharp decline in 2011, where the education sector only had a portion of 0.74% of the total Special Autonomy Fund. Then after that, the Aceh Government tried to maintain the ratio in the education sector to 20% since 2012 (Badan Akuntabilitas Keuangan Negara, 2020).

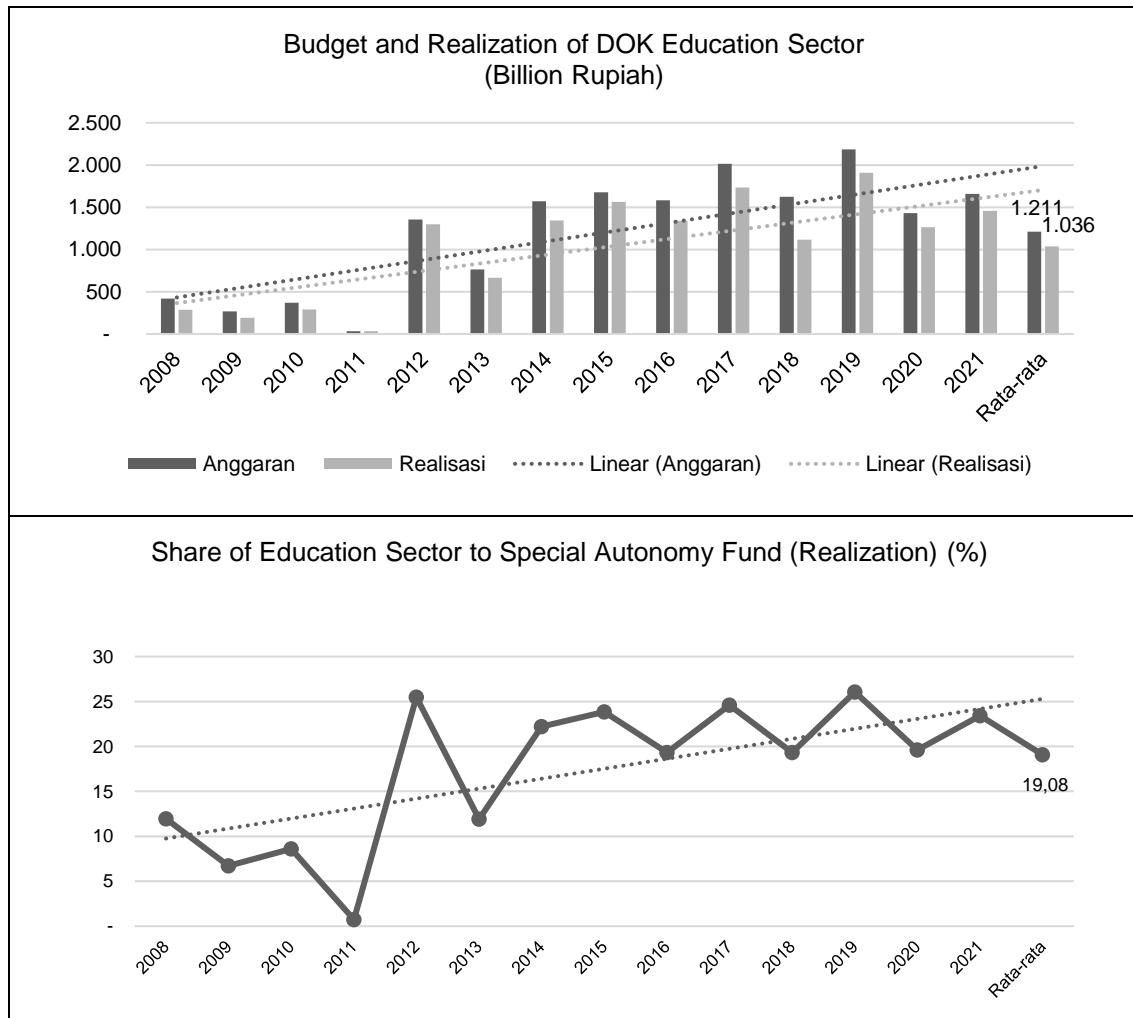


Figure 3 Budget Development and Realization in the Education Sector along with the Allocation Portion of the Education Sector to the Special Autonomy Fund

Source: (BPKA, 2021) (Reworked)

Regarding program activities in the field of education, based on the report of Bappeda Aceh (2020) that the education sector has three groups of activity programs during the period 2008-2020 used for three activity programs. The program of activities that have been realized includes: first, scholarships for higher education (S1, S2, S3) and other scholarships with a total realization of the allocation of IDR 0.93 trillion for 14,169 people; *second*, the procurement of educational facilities with a total allocation of IDR 6.19 trillion; *finally*, the procurement of educational infrastructure with a total realization of Rp. 8.18 trillion. From the activity program, it can be seen that the funds allocated for the field of education are used to improve the quality of human resources. Improving the quality of human resources will improve productivity, thus having a positive impact on reducing poverty. However, it will take longer to see the impact of increased

productivity that can help reduce poverty. However, improving the quality of human resources through education will have a long-term impact because education is one of the productive investments because it involves human capital that can increase productivity (Todaro & Smith, 2012), so that poor people can get out of poverty. poverty.

Allocation of Special Autonomy Fund in the Health Sector to Poverty

The Special Autonomy Fund has contributed to realizing health services in Aceh through allocations in the health sector. During the period 2008-2021, the health sector had an average realization allocation of 14.13% of the total realization of the Special Autonomy Fund per year. In terms of budget and realization of health sector funds and the portion of the allocation of health sector funds to the Special Autonomy Fund, there is an increasing trend of fluctuations. The increase in allocation for the health sector is quite high, where there was a significant increase in the first three years of the implementation of Special Autonomy. Then, the allocation of the health sector continued to increase during the 2008-2021 period, except in 2015. Thus, the Special Autonomy Fund for health sector contributed relatively significantly to health spending in Aceh in that period (Handra et al., 2018).

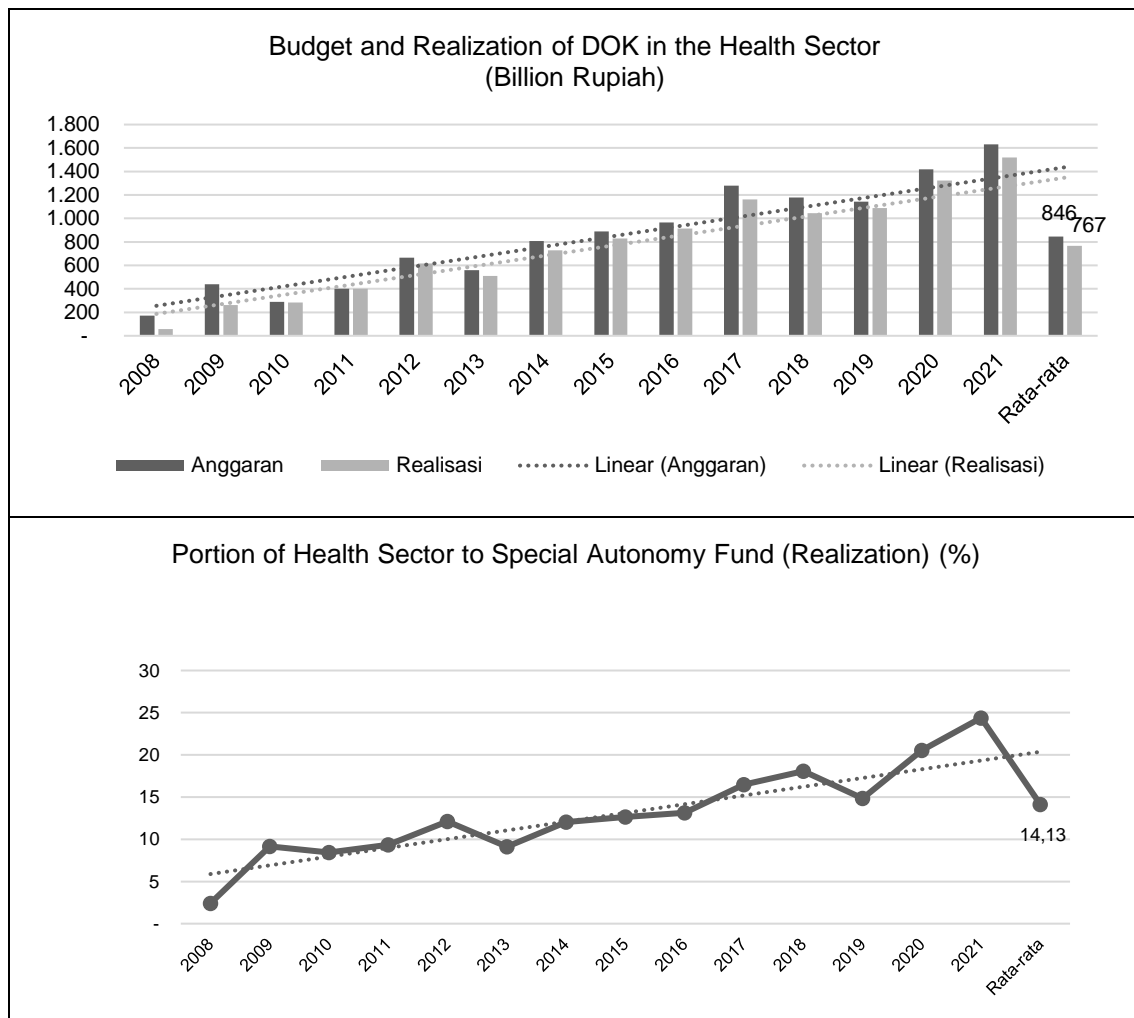


Figure 4 Budget Development and Realization in the Health Sector along with the Portion of Health Allocation to the Special Autonomy Fund

Source: (BPKA, 2021) (Reworked)

Related to the activity programs that have been implemented in the health sector in the 2008-2020 period, six groups of activity programs are used (Bappeda, 2020). The program of activities that have been carried out include: *first*, JKA (Aceh Health Insurance) which has the

largest allocation reaching Rp 4.63 trillion or reaching 45.32% of the total health sector funds in the 2008-2020 period; *second*, rehabilitation and construction of hospitals with a total realization of allocation of Rp 2.81 trillion; *third*, rehabilitation of puskesmas in 351 puskesmas units in Aceh, with a total cost of Rp 1.29 trillion; *fourth*, rehabilitation and development with a total realization of allocation of Rp 0.53 trillion which includes pustu/poskesdes in 2,337 pustu/poskesdes units in Aceh; *fourth*, funding for medical devices with a total of Rp 0.62 trillion; *Finally*, the procurement of operational vehicles and ambulances with a total of Rp 0.33 trillion.

The work program in the health sector seems to be used to ensure the fulfillment of basic health needs in Aceh. The improvement of quality in the provision of health services can increase people's productivity because with healthier conditions, they can be more active in activities. With an increase in productivity, you will get a better income compared to people with low productivity (Todaro & Smith, 2012). Higher incomes will help the poor to get out of poverty. However, it goes back again that it takes longer to see an increase in productivity that will affect poverty levels.

CONCLUSION

The estimation results in this study show that the allocation of Special Autonomy Funds in the fields of infrastructure, education, and health has not significantly affected the poverty rate in Aceh. This is because the influence of these three areas is not directly on poverty, so it takes a longer time to see the effect on poverty levels. Therefore, this allows regression results that have not yet affected the poverty level for the period 2014-2021.

REFERENCES

- Badan Akuntabilitas Keuangan Negara. (2020). *Penelaahan Atas Dana Otonomi Khusus Provinsi Aceh*. 101–151. [Google Scholar](#)
- Bappeda. (2020). *Dana OTSUS Abadi Aceh Menuju Daerah Model*. [Google Scholar](#)
- BPK RI. (2018). *Kajian Atas Pengelolaan Dan Pertanggung Jawaban Dana Otonomi Khusus Provinsi Papua, Papua Barat dan Provinsi Aceh*. [Google Scholar](#)
- BPKA. (2021). *Rekapitulasi Alokasi Dan Realisasi Penggunaan Dana Otonomi Khusus Tahun 2008-2021*. Aceh: BPKA. [Google Scholar](#)
- BPS. (2022). *Sistem Informasi Rujukan Statistik (SIRuSa)*. Badan Pusat Statistik. <https://sirusa.bps.go.id/sirusa/index.php/site/search?search=AHH&yt0=Cari> [Google Scholar](#)
- Gujarati, D. (2016). *Dasar-Dasar Ekonometrika*. Erlangga. [Google Scholar](#)
- Handra, H., Suratman, E., Siddik, M., & Nurkholis, N. (2018). *Evaluasi Pemanfaatan Dana Otonomi Khusus Aceh 2008 - 2017*. <https://sikompak.bappenas.go.id/> [Google Scholar](#)
- Hasta Budiratna, & Riatu M. Qibthiyah. (2020). Evaluasi Atas Transfer Dana Otonomi Khusus Di Aceh, Papua, Dan Papua Barat. *Jurnal Indonesia Sosial Sains*, 1(5), 402–414. <https://doi.org/10.36418/jiss.v1i5.103> [Google Scholar](#)
- Kemenkeu. (2019). *Kajian Efektivitas Implementasi Dana Otonomi Khusus*. Badan Kebijakan Fiskal : Kementerian Keuangan Republik Indonesia. [https://fiskal.kemenkeu.go.id/kajian/2019/09/17/09450632855111-kajian-efektivitas-
implementasi-dana-otonomi-khusus](https://fiskal.kemenkeu.go.id/kajian/2019/09/17/09450632855111-kajian-efektivitas-implementasi-dana-otonomi-khusus) [Google Scholar](#)
- Kharisma, V. D., Samputra, P. L., & Muntaha, P. Z. (2020). Analisis Dampak Kebijakan Alokasi Dana Otonomi Khusus Bidang Pendidikan dan Kesehatan Terhadap Indeks Pembangunan

Manusia di Provinsi Papua. *Journal Publicuho*, 3(1), 1.
<https://doi.org/10.35817/jpu.v3i1.11392> [Google Scholar](#)

Setiawan, D., Ulfa, K., & Purwaningsih, T. (2020). Poor Aceh: The Impact of Special Autonomy as Effort Poverty Reduction in Aceh. *DIA Jurnal Ilmiah Administrasi Publik*, 18(2), 1–14.
<https://doi.org/10.30996/dia.v18i2.3654> [Google Scholar](#)

Tamam, N., & Rahma, H. (2013). Pengaruh Pengeluaran Pemerintah Daerah untuk Infrastruktur terhadap Tingkat Kemiskinan di Kabupaten/Kota Provinsi Jawa Timur. *Jurnal Kebijakan Ekonomi*, 8(2), 37–49. [Google Scholar](#)

Tamberan, Y. W., Tawakal, M. A., Betaubun, S., Lamalewa, F., Kore, E. L. R., & Anwar, A. I. (2020). The allocation of special autonomy funds and their impact on regional economic inequality in Papua Province. *IOP Conference Series: Earth and Environmental Science*, 473(1), 012031. <https://doi.org/10.1088/1755-1315/473/1/012031> [Google Scholar](#)

Todaro, M. P., & Smith, S. C. (2012). *Economic Development* (11th Edition). Addison-Wesley. [Google Scholar](#)