

The Effect of Original Local Government Revenue, General Allocation Fund, and Specific Allocation Fund on Economic Growth with Capital Expenditures as a Moderating Variable in Regencies and Cities in North Sumatra Province

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ABSTRACT

This study aims to determine the effect of Regional Original Revenue (PAD), General Allocation Funds (DAU), and Special Allocation Funds (DAK) on economic growth with capital expenditure as moderating variables in regencies/cities in North Sumatra Province. This type of research is causal associative. The population of this study is all regency/city governments in North Sumatra Province, totaling 33 districts and cities consisting of 25 districts and eight cities. The sample was chosen using the saturated sample method using all 33 regencies/city research populations from 2011-2020. So the number of research samples is 330 samples. Data analysis methods use multiple linear regression and residual tests.

This study's results indicate that PAD, DAU, and DAK simultaneously significantly influence economic growth in regencies/cities in North Sumatra Province. The PAD and DAU variables significantly positively affect economic growth in the regencies/cities in the province of North Sumatra. In contrast, the DAK variable partially has a significant negative effect on economic growth in the regencies/cities in the province of North Sumatra. Variable Capital Expenditures as Moderating Variables can moderate relationships Between PAD, DAU, and DAK to economic growth in regencies/cities in North Sumatra Province.

Keywords: Regional Original Revenue (PAD), General Allocation Funds (DAU), Specific Allocation Funds (DAK), Economic Growth, and Capital Expenditures

INTRODUCTION

Since the enactment of reforms, Indonesia began to implement regional autonomy to spur every local government to take care of their respective regions following existing potential. Regional autonomy is an effort to empower regions in regional decision-making related to managing local resources owned according to each region's interests, priorities, and potential. It is per the provisions of Law Number 32 of 2004 concerning Regional Government and Law Number 33 of 2004 concerning Central and Regional Financial Balance, which forms the legal basis for implementing regional autonomy. With regional autonomy, there is decentralization involving regional financial management, economic planning (including compiling regional development programs), and other planning delegated from the center to the region. Local governments have broad authority in regulating existing resources to improve the progress and prosperity of the community.

Regional development as an integral part of national development is essentially an effort to increase the capacity of the regional

government to create a reliable and professional ability in running the government and providing excellent service to the community. Regional development also means that it enables the region to manage its economic resources efficiently and effectively for the region's progress and the community's welfare. Regional government development is constantly faced with a lack of optimization of local governments using existing revenue sources. Local governments will become more advanced, independent, prosperous, and competitive if they have adequate sources of financing (Panjaitan, 2019). Of course, in addition to having a good source of financing, the government must also have a good source of funding. The phenomenon that occurs, often the regional government experiences a budget deficit shows that this indicates the lack of income and financing or not good management of the regional financial resources.

According to Harahap (2002), economic growth is a picture of government policies' impact, especially in the economic field. Economic growth is defined as a process that causes an increase in real income per capita of a country's population in the long run, which is accompanied by an improvement in the institutional system. From this definition, economic growth has an understanding (Tarigan, 2004):

1. A process that means a change that occurs continuously.
2. Efforts to increase per capita income.
3. The increase in income per capita must continue in the long run.
4. Improvement of institutional systems in all fields.

The economic growth rate shows the extent of the performance of various economic sectors in generating added value or community income in one period. One crucial indicator to determine the economic conditions in a country or region in a certain period is the Gross Domestic Product Data (GDP)/Gross Regional Domestic Product (GRDP), both based on applicable prices and at constant prices. GDP/GDP is all

economic units' total added value. GDP/GRDP at the basis of applicable prices illustrates the added value of goods and services calculated using the valid prices every year. At the same time, GDP/GRDP at a constant price shows the added value of the goods and services, which are calculated using prices in a specific year as the prior year. Two methods can be used to calculate the GRDP: direct and indirect (Armansyah, 2004).

Economic growth will be reflected in the increase in per capita income and improving the level of welfare in the community. One of the indicators of a country's economic growth is the gross domestic growth rate or gross national product. GRDP and regional income per capita at constant prices help determine the economic growth of the population of a region (Daulay, 2011).

Todaro (2003) said there are three main factors or components in the economic growth of each nation, including:

a. Capital accumulation includes all forms or types of investment invested in land, physical equipment, and capital or human resources. Capital accumulation occurs when a portion of income is saved and reinvested to increase output and income in the future.

b. Population growth, which will ultimately increase the workforce. Population growth and workforce growth (several years after population growth) are traditionally considered positive factors that spur economic growth. The larger number of workers means that it will increase the number of productive personnel.

c. Technological advances are the most important source of economic growth. Technological advances occur because of the discovery of new ways to improve the old ways of handling traditional jobs such as planting corn, making clothes, or building a house.

In this study, the regional economic growth was proxied by GRDP based on constant prices in the GRDP year measured by Rupiah and declared billions of Rupiah. In the regional government system, economic

growth is indicated by the increase in the production of goods and services measured through gross regional domestic product based on constant prices (GRDP ADHK), where the influence of inflation has been issued. GRDP data can also describe the ability of the region to manage its development resources. Therefore, the amount of GRDP in each region varies following each region's potential and production factors (Malau, 2013).

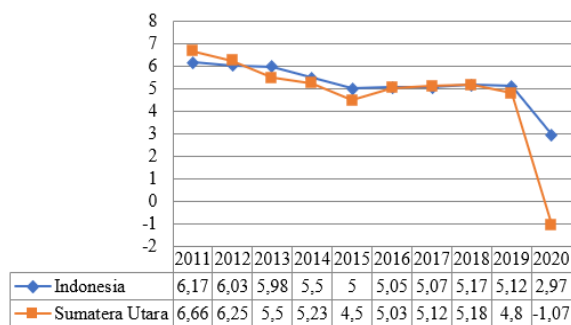


Figure 1. North Sumatran and National Economic Growth Rate in 2011-2020

The percentage of national economic growth (Indonesia) from 2011-2020 has a declining trend, which means there is a slowdown in economic growth. Thus, the economic growth rate in the Province of North Sumatra also experienced a slowdown in economic growth.

The percentage of North Sumatra's economic growth has the same pattern as that of national economic growth, which has a declining trend. In the last ten years, Indonesia posted the highest GDP growth in 2011, which was 6.17%. Indonesia's economic growth experienced a slight slowdown throughout 2020 due to global economic growth that experienced a decline. It is due to the Pandemic Covid-19 that hit the world, including Indonesia. Pandemic Covid-19 makes the process of recovering the national economy longer. Economic performance improvement is driven by the role of fiscal stimulus or APBD instruments in handling Pandemi Covid-19 and national economic recovery programs.

The economic growth of the regency/city-regional government in North Sumatra is not so good because the local government

has not optimized income or allocated expenditure appropriately. Mardiasmo (2009) argues that measurement of economic growth is crucial to assess the accountability and performance of local governments to create better public services. The direction of the Regional Economic Policy aims to an umbrella in realizing the vision and mission of the regional head and completing the strategic issues and regional problems through the formulation of priority programs and development activities that will be carried out. The priority of regional development programs by looking at the economic, national, and regional conditions of North Sumatra as it is now should be prioritized to strengthen further and develop the regional economy, which is equipped with better public service and infrastructure conditions.

In the era of regional autonomy, local governments are expected to be able to carry out efficient allocation of resources. The ability of the region to manage resources efficiently is reflected in the policies implemented by the Regional Government as the planner, which will impact the region's optimal economic success. With the existence of autonomy, each region is expected to be able to develop the potential of both natural resources, human resources, and culture to increase prosperity for all regional communities. In other words, regional autonomy demands regional independence in various aspects, especially planning, finance, and implementation. The source of income is certainly one that affects the economic growth of local government. As an autonomous region, regencies and cities in North Sumatra have a source of local revenue. Much original local government revenue research (PAD) has significantly influenced regional economic growth.

According to Law Number 33 of 2004, local revenue called PAD is the income earned by the region under regional regulations and legislation. According to Bangun (2009), PAD means the internal income of the local government in its jurisdiction area.

According to Mardiasmo (2009), PAD comes from the original regional economic resources, which are divided into four types of income: Regional Taxes, Regional Retribution, the results of the management of separated regional wealth, and other legitimate resources PAD.

By-Law No.33 of 2004 concerning Financial Balance between the Central and Regional Governments Article 6 that the source of local revenue is as follows:

1. The original local revenue is legitimate
 - a. Local tax results
 - b. The results of regional levies
 - c. The results of regional-owned companies and the management of other regional wealth separated.
 - d. Other legitimate opinions
2. Revenue comes from giving government, which consists of:
 - a. Donations from the government,
 - b. Other contributions regulated by laws and regulations,
 - c. Other legitimate income

Regions can fully utilize the PAD component following the region's needs and priorities. At the same time, the Regional Government can try to explore the sources of regional income (Florida, 2006). Therefore, it becomes the local government's duty and authority to implement fiscal authority, and the regional government must be able to determine the capacity and identify the resources it has.

The following in Table 1 will be presented a comparison data between Regional Original Revenue and North Sumatra Regency/City Regional Revenue in 2011-2020.

Table 1. Budget and Realization of North Sumatra Regency/City PAD (in billions of Rupiah)

Year	Regional Revenue Budget	PAD Budget	Realization of Regional Income	PAD Realization	% PAD Realization	PAD Contribution
2011	20.147.642.000.000	1.793.064.000.000	21.104.323.574.816	1.933.399.899.452	95,83	9,16
2012	24.175.550.000.000	2.700.829.000.000	24.805.220.354.348	2.386.090.843.738	88,35	9,62
2013	29.391.684.000.000	3.490.152.000.000	27.971.206.176.129	2.661.771.173.283	76,27	9,52
2014	31.296.915.000.000	3.499.002.000.000	31.353.271.269.478	3.173.703.811.401	90,70	10,12
2015	34.340.264.840.873	4.121.006.800.322	35.740.914.105.311	3.665.792.541.918	88,95	10,26
2016	41.806.875.049.404	4.541.639.864.052	40.300.199.444.258	3.890.979.624.244	85,67	9,65
2017	41.907.371.573.458	5.047.711.276.800	41.151.944.703.211	4.844.532.698.817	95,97	11,77
2018	42.802.921.545.733	6.505.437.706.992	41.630.928.086.471	5.161.090.548.640	79,34	12,40
2019	45.978.913.674.636	6.368.721.004.642	45.259.609.101.324	4.780.134.985.314	75,06	10,56
2020	46.769.651.511.222	7.105.142.711.401	40.971.060.987.428	4.679.070.121.746	65,85	11,42

Source: *djpk.depkeu.go.id (Processed), 2022*

Based on Table 1, the PAD realization report has not met the budgeted target. PAD realization trends show trends that tend to decline over the past ten years. PAD contribution to regional income ranges from 9.16% - 12.40%. It shows that the still low PAD contribution as a source of regional income is used for financing regional development. It follows Halim's (2014) Regional financial capacity can be seen from the size of the PAD obtained by the regions in financing regional development. Regional financial capability is low if PAD is 0%-25%, regional financial capacity is 25%-50%, and regional financial capability is high if PAD > 50%.

In Maryati & Endrawati's research (2010), PAD had a significant and positive influence on the economic growth of the local government. PAD provides opportunities for the regions to increase infrastructure development, impacting the community's welfare and increasing local governments' economic growth. These results are in line with Gunantara's research (2012), Malau (2013), Suherman (2013), Muchlis (2013), and Pulungan (2016).

However, the above research is not in line with the research of Hamzah (2009), which shows that PAD has a negative and insignificant effect on economic growth. These results align with research by Fitriyanti and Partolo (2009) and Daulay (2011). It happens due to the more significant financing used than the income generated.

The General Allocation Fund (DAU) is a fund from the State Budget allocated for equitable financial capacity between regions to finance their expenditure needs in implementing decentralization. Thus, DAU is a central component of regional transfer sourced from the state budget to finance regional spending. DAU is allocated to equalize by taking into account the potential of the region, area, geographical condition, population, and the level of income of the community in the regions so that the differences between developed areas and problematic areas can

be minimized. DAU, an area, is allocated based on the budget deficit and basic allocation of the fiscal gap. Fiscal gaps are fiscal needs reduced by regional fiscal capacity.

It shows that DAU is prioritized for regions with low fiscal capacity. Based on Law Number 33 of 2004, the portion of DAU is determined as at least 26% of the Domestic Net Income as stipulated in the APBN. In contrast, the DAU distribution ratio for provinces and regencies/ cities is determined by a balance of power between provinces and districts/ cities.

The following will be presented a comparison data between the General Allocation Fund and the Regional Revenue of the Regency/City of North Sumatra in 2011-2020:

Table 2. Budget And Realization of The General Allocation of Regency/City

Year	Regional Revenue Budget	DAU Budget	Realization of Regional Income	DAU Realization	% DAU Realization	DAU Contribution
2011	20.147.642.000.000	12.690.461.000.000	21.104.333.574.816	12.641.673.275.724	99,62	59,90
2012	24.175.550.000.000	15.259.795.000.000	24.805.220.354.348	15.039.302.222.000	98,56	60,63
2013	29.391.684.000.000	17.469.450.000.000	27.971.206.176.129	17.365.770.242.000	99,41	62,08
2014	31.296.915.000.000	19.144.552.000.000	31.353.271.269.478	19.045.485.778.097	99,48	60,74
2015	34.340.264.840.873	20.176.057.436.489	35.740.914.105.311	19.608.694.363.563	97,19	54,86
2016	41.806.875.049.404	21.583.832.022.000	40.300.199.444.258	20.763.969.191.464	96,20	51,52
2017	41.907.371.573.458	22.284.445.458.776	41.151.944.703.211	21.919.684.501.000	98,36	53,27
2018	42.802.921.545.733	21.518.776.637.600	41.630.928.086.471	21.442.356.759.041	99,64	51,51
2019	45.978.913.674.636	22.341.348.878.000	45.259.609.101.324	20.314.684.368.134	90,93	50,88
2020	46.769.651.511.222	22.812.707.406.000	40.971.060.987.428	20.006.741.108.000	87,70	50,13

Source: djpk.depkeu.go.id (Processed), 2022

Based on data from Table 2, the DAU realization report has not met the budgeted targets. DAU realization trends show trends that tend to increase over the past ten years. DAU's contribution to regional income ranges from 50.13% - 62.08%. It shows the high contribution of DAU as a source of regional income used for financing regional development. It means the local government is still very dependent on the central government to finance its development activities. In Halim's research (2014), DAU set at least 26% of the total regional revenue. DAU's contribution to North Sumatra Province is 50.88% - 62.08% shows that dependence on central government transfer is still high in regional development financing.

Based on table 2, it can be seen that the role of the general allocation fund of central government transfer is still very large, which is more than 50% of the total regional income. The amount also tends to fluctuate from year to year. Although the above percentage shows the amount of regional dependency on general allocation funds, according to Suparmoko (2016), Indonesia is in the development stage where the transfer of central government to high local governments is still considered very important in the economic sense. The transfer of the central government to the local government plays an essential role in achieving the balance of regional development and reducing gaps in regional income. With a general allocation fund aimed at reducing inequality and achieving a balance of development, it is hoped that local governments can increase their economic growth by improving welfare and services to the community.

Indicators of the implementation of regional autonomy can be seen in compiling directions and policies in the financial sector, increasing regional revenue, and developing and providing various public service facilities for the local community. The local government should be able to finance every region's needs, including providing public service facilities with funds sourced from PAD. But what happened was that the largest source of revenue came from central government transfers in the form of general allocation funds. According to Husni (2011), this central government transfer has become one of the main funds of the regional government to finance regional expenditure. This allocation is intended to achieve two broad goals: efficiency and equality. With the balance fund, there should be no more differences in economic growth that is too large among districts/cities in North Sumatra Province.

In Daulay's research (2011), DAU had a significant and positive influence on the economic growth of the local government. According to him, the effect of general

allocation funds on economic growth shows that there is still a dependence on the regional government towards the central government. The general allocation funds provided by the central government are expected to increase local governments' economic growth. These results are in line with Muis's research (2012), Gunantara (2012), Malau (2013), Muchlis (2013), Amuna (2013), Ramadhani (2015) and Pulungan (2016). However, the above research is not in line with Hamzah's (2009), which shows that DAU has a negative and insignificant effect on economic growth. These results are in line with Husni's research (2011).

Specific Allocation Funds (DAK) are funds from the State Budget intended for the regions to finance special needs. The allocation of DAK pays attention to the available funds in the state budget, which means the amount of DAK cannot be ascertained yearly. DAK is a fund derived from the Regional Budget (APBD) and is allocated to the district/city area to finance specific special needs, depending on its supply in the APBD. The amount is not set every year in the state budget. According to Husni (2011), DAK is an assistance fund derived from the state budget allocated to the regions to help finance certain/special needs, namely:

- a. Needs that cannot be estimated in general by using the public location formula
- b. Needs that are national commitments or priorities are allocated based on regional proposals.

Not allocated to assist regions in funding the physical needs of basic facilities and infrastructure are national priorities. It occurs in education, health, roads, irrigation, drinking water, government infrastructure, marine and fisheries, environment, family planning, forestry, rural facilities, and infrastructure and trade. The greater the proportion of DAK received by the regions from the central government will cause the revenue owned by the regional government to be even greater. The following

researchers will present a comparison data between special allocation funds and district/city revenue of North Sumatra in 2011-2020.

Table 3. Budget And Realization of Specific Allocation Funds of Regency /City of North Sumatra (In Billion Rupiah)

Year	Regional Revenue Budget	DAK Budget	Realization of Regional Income	DAK Realization	% DAK Realization	% DAK Contribution
2011	20.147.642.000.000	1.516.192.000.000	21.104.323.574.816	1.485.766.575.000	97,99	7,04
2012	24.175.550.000.000	1.515.323.000.000	24.805.220.354.348	1.454.291.738.000	95,97	5,86
2013	29.391.684.000.000	1.800.706.000.000	27.971.206.176.129	1.692.556.915.000	93,99	6,05
2014	31.296.915.000.000	1.839.324.000.000	31.353.271.269.478	1.718.055.946.945	93,41	5,48
2015	34.340.264.840.873	2.370.783.620.000	35.740.914.105.311	2.240.463.308.000	94,50	6,27
2016	41.806.875.049.404	6.308.140.651.939	40.300.199.444.258	6.018.935.815.889	95,42	14,94
2017	41.907.371.573.458	6.693.073.033.010	41.151.944.703.211	6.399.390.737.546	95,61	15,55
2018	42.802.921.545.733	6.631.957.966.339	41.630.928.086.471	6.204.418.550.091	93,55	14,90
2019	45.978.913.674.636	7.006.159.764.412	45.259.609.101.324	6.255.416.239.257	89,28	13,82
2020	46.769.651.511.222	6.796.436.610.021	40.971.060.987.428	5.476.639.518.830	80,58	13,37

Source: *djpk.depkeu.go.id (Processed), 2022*

Based on data from Table 3, the DAK realization report has not met the budgeted targets. The trend of realization is not showing the results of trends that tend to decline over the past ten years. DAK's contribution to regional income ranges from 5.48% - 15.55%. It shows the high contribution of DAK as a source of regional income used for financing regional development. It means that the local government is still very dependent on the central government to finance its development activities that are included in the national priority category. According to Halim (2014), DAK is determined at least 10% of the total regional revenue. DAK's contribution to North Sumatra Province is 5.48% - 15.55%, which shows that dependence on central government transfer is still high in financing regional development.

The gap between regency/city regions is often a severe problem. Some regions achieved significant economic growth, while others experienced delays. It is a phenomenon of inequality in income distribution from province to region. DAK is fully used for capital expenditures for public purposes. The consequences are due to the surrender of the central government's authority to the regional government, resulting in the need for financial considerations between the central and

regional governments, which caused a significant transfer in the APBN and the central government to the regional government. And the local government can freely use these funds to provide better services to the community or for other purposes that may not be important.

In Husni's research (2011), DAK has a significant and positive influence on the economic growth of the local government. With the sources of financing, local governments must be able to allocate capital expenditure well because capital expenditure is one step for local governments in constructing facilities and infrastructure. These results are in line with the research of Daulay (2011), Muis (2012), Muchlis (2013), Amuna (2013), and Ramadhani (2015). Malau Research (2013) produced results. Namely, DAK has a negative and significant influence on economic growth. However, the above research is not in line with the research of Setiyawati & Hamzah (2007), which shows that DAK has a negative and insignificant effect on economic growth. These results are in line with research Maryati & Endrawati (2010), Muchlis (2013) and Pulungan (2016). According to him, this happens due to the inadequate target of the use of the budget used for development expenditure so that the activities that become priority are less achieved.

Capital expenditure is a local government expenditure whose benefits exceed one fiscal year. It will increase regional assets and routine spending, such as maintenance costs in the general administrative expenditure group. Capital expenditure obtains regional government assets such as equipment, infrastructure, and other permanent assets.

The local government allocates its capital expenditure budget in the APBD to carry out development plans through projects and various development sectors. It is expected to touch the community's productive economic sector and economic growth in the area.

In connection with public services, the allocation of capital expenditure is crucial to consider because it will increase the productivity of the regional economy. The more capital expenditure, the higher the economic productivity because capital expenditure on infrastructure impacts economic growth and job creation. Harianto (2007) explained that the availability of good infrastructure is expected to create efficiency and effectiveness in various sectors, the community's productivity is expected to be higher, and economic growth will increase.

According to Sihite (2015), another problem in regional financial management is that the percentage of funds used for capital expenditure has not reached 30% following the APBD preparation guidelines regulated by the Minister of Home Affairs Regulation in the City Regency in North Sumatra Province. The high proportion of the budget for indirect expenditure (employee salaries) rather than direct expenditure (both in the form of public service funds or investment funds) that are directly related to the organization's objectives results in the low economic growth of local governments in the eyes of the community. This condition is in line with the opinion of Halim (2014), which states that employee expenditure whose portions are too high compared to capital expenditure of a problem that has often been news.

The following will be presented a comparison data between capital expenditure and the regency/city expenditure of North Sumatra in 2011-2020. Based on data from Table 4. Capital expenditure realization reports have not met the budgeted targets. The trend of capital expenditure realization shows the results of trends that tend to increase over the past ten years. It shows that the still a low allocation of capital expenditure on regional expenditure. The alignment of APBD expenditure on infrastructure provision in areas reflected through capital expenditure is still low.

Table 4. Budget and Realization of Capital Expenditures with Regional Expenditure of North Sumatra Regency/City (in billions of Rupiah)

Year	Regional Budget	Capital Expenditure Budget	Realization of Regional Expenditure	Realization of Capital Expenditure	% Realization of Capital Expenditure	Contribution of Capital Expenditure
2011	21.228.003.000.000	4.548.850.000.000	21.330.424.833.829	4.348.657.299.883	95,60	20,39
2012	25.014.924.000.000	5.761.272.000.000	24.205.421.609.233	5.316.688.952.866	92,28	21,96
2013	30.333.344.000.000	7.869.006.000.000	29.958.153.403.796	6.958.153.403.796	88,42	23,23
2014	32.395.885.000.000	7.643.163.000.000	31.002.319.240.532	6.921.712.675.881	90,56	22,33
2015	34.346.809.936.044	7.388.656.532.247	32.818.877.708.178	7.078.852.693.253	95,81	21,57
2016	42.989.721.311.123	8.683.738.674.458	40.768.230.456.322	8.483.200.122.977	97,69	20,81
2017	43.626.392.391.504	8.854.947.231.719	41.967.690.818.882	8.854.658.422.997	98,88	21,10
2018	44.876.080.681.357	8.854.551.355.441	41.584.430.120.709	8.061.177.939.609	91,04	19,39
2019	47.036.221.872.574	8.739.600.373.690	44.470.005.984.761	7.054.859.637.720	80,72	15,86
2020	48.050.435.517.805	7.909.019.520.325	41.295.266.034.878	5.619.950.616.176	71,06	13,61

Source: djpk.depkeu.go.id (Processed), 2022

Based on Table 4, the ratio of capital expenditure to APBD expenditure from 2011 - 2020 is still fluctuating. The contribution of capital expenditure to regional expenditure ranges from 13.61% - 23.23%. The low capital expenditure on APBD expenditure is due to the greater employee expenditure needs and service goods expenditure compared to the allocation for infrastructure expenditure so that it can affect the amount of regional expenditure, which can then burden regional financial stability. At the same time, local government policies must plan this capital expenditure in terms of infrastructure development listed in the Strategic Plan (Renstra) and the Regional Medium-Term Development Plan (RPJMD). Therefore, it can hamper the regional development rate, so achieving the hope of increasing regional economic growth will be difficult.

Daulay's research (2011) shows that capital expenditure significantly affects economic growth. Armaja et al. (2015) research revealed the positive influence of capital expenditure on the economic growth of the district/city-regional government in Aceh. According to Armaja et al. (2015), the high amount of spending will improve better and quality services to the community. Pratolo (2009) also revealed the positive effect of capital expenditure on economic growth, which was calculated using gross regional domestic growth in the Regency of West

Lombok. Muis's research (2012) shows that capital expenditure can moderate DAU and DAK to economic growth. Malau's research (2013) and Pulungan's (2016) show that capital expenditure can moderate PAD, DAU, and DAK on economic growth. The better the public service provided, the better the management of local government spending.

However, the above research is not in line with Hamzah's research (2009) shows that capital expenditure does not affect economic growth. Sitepu (2009) and Gunantara show that capital expenditure cannot moderate PAD and DAU on economic growth.

The existence of research gaps in the form of inconsistencies in some of the components above and the phenomena that occur in the economic growth of the district/city-regional government in North Sumatra, then research will be held to test the factors that affect economic growth in this case, is PAD, DAU, DAK and Capital Expenditure. Based on the description above, a study will be conducted titled "The Effect of Original Local Government Revenue, General Allocation Fund, and Specific Allocation Fund on Economic Growth with Capital Expenditures As A Moderating Variable In Regencies And Cities In North Sumatra Province."

Framework

Following the description of the problem background, literature review, and previous research, the conceptual framework for this research is as follows:

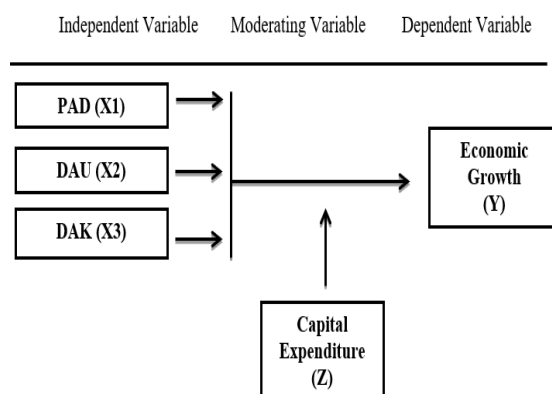


Figure 2. Conceptual Framework

H1: PAD has a significant effect both simultaneously and partially on the economic growth of local governments in regencies/cities in North Sumatra Province

H2: DAU has a significant effect both simultaneously and partially on the economic growth of local governments in regencies/cities in North Sumatra Province

H3: DAK significantly influences both simultaneously and partially the economic growth of local governments in regencies/cities in North Sumatra Province

H4: Capital expenditure can significantly moderate the relationship between PAD, DAU, and DAK to regional government economic growth in regencies/cities in North Sumatra Province

RESEARCH METHODS

This study uses a causal research design, where causal research is research by identifying causal relationships between variables (Sugiyono, 2018). This study uses causal research to see the effect of regional original revenue (PAD), General Allocation Funds (DAU), and Special Allocation Funds (DAK) as independent variables of economic growth as dependent variables through capital expenditure as moderating variables.

The data needed in this study was obtained from the North Sumatra Provincial/City APBD report in 2011-2020 by accessing the Director-General of Finance Balance of the Republic of Indonesia <http://djpk.kemenkeu.go.id>. Economic growth data by accessing the Site of the Central Statistics Agency of North Sumatra Province, namely <http://sumut.bps.go.id>. Data analysis techniques using SPSS 22.0 for Windows software aids.

The population in this study was a report on the realization of APBD and the economic growth of the Regency and City of North Sumatra Province. The sampling technique used in this study is saturated sampling, which determines the sample with a census in which the whole population is used as a sample. The number of samples used is 33

districts/cities, with a research period of 10 years. So the number of observations in this study was $33 \times 10 \text{ years} = 330$ data observations.

RESULT AND DISCUSSION

Descriptive statistics

Table 5. The results of the description of the research variable
Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
GRDP (Y)	330	1,01	2,20	272,05	1,8244	0,46388
PAD (X ₁)	330	1,46	3,26	579,69	1,7566	0,45962
DAU (X ₂)	330	1,60	3,22	895,69	2,7142	0,25714
DAK (X ₃)	330	1,25	2,66	649,11	1,9670	0,32399
Capital Expenditure (Z)	330	1,73	3,00	752,04	2,2789	0,21282
Valid N (listwise)	330					

Source: Processed from secondary data, 2022

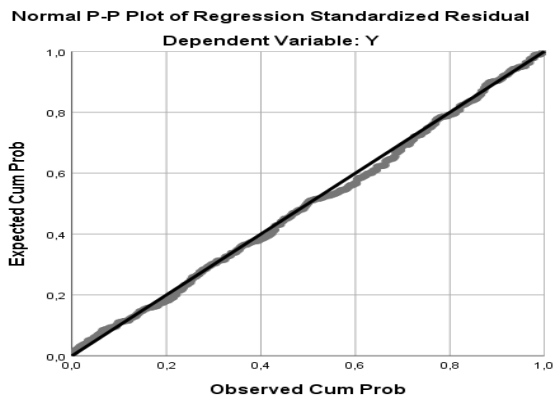
The table above shows that:

1. Medan City is an area that obtains the highest economic growth, and West Pakpak Regency is the region that gets the lowest economic growth compared to other districts/cities.
2. Medan City is the area that obtains the largest PAD, and West Pakpak Regency is the area that gets the smallest PAD when compared to other regencies/cities.
3. Medan City is also an area that obtains the largest DAU, and West Pakpak Regency gets the smallest DAU when compared to other districts/cities.
4. The area that obtains the highest DAK is Deli Serdang Regency. The area that gets the lowest in the city of Sibolga.
5. The area with greater capital expenditure is Deli Serdang Regency, and Sibolga City is the area with the lowest capital expenditure.

Classic Assumption Test

Normality test

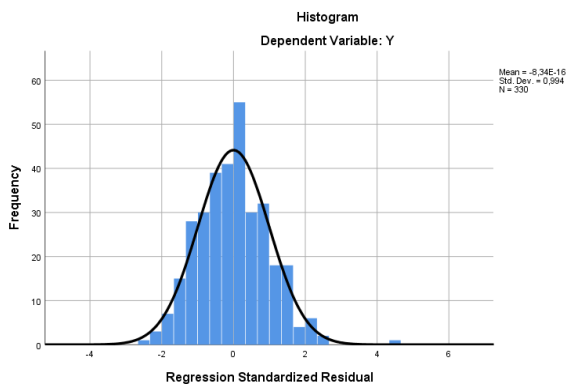
One of the easiest ways to see residual normality is to look at the histogram graph that compares the observation data with a distribution close to normal (Ghozali, 2013). The results of the data normality test can be seen in the graph below.



Source: Processed from secondary data, 2022
Figure 3. P-plot normal graph

The picture above shows that the data spread around the diagonal line and follows the direction of the diagonal line of the P-plot graph. This pattern shows that each variable is normally distributed, and the regression model meets the normality assumption.

The normality pattern can also be seen in the histogram graph in the following image, which shows that the histogram graph provides a normal distribution pattern, not stray left or right.



Source: Processed from secondary data, 2022
Figure 4. Histogram Graph

Multicollinearity Test

Symptoms of multicollinearity can be seen from the correlation value between variables in the correlation matrix. Erlina (2011) states that if there is a high correlation between independent variables above 0.8, this indicates multicollinearity. Multicollinearity test results are presented in Table 6 below.

Table 6. Multicollinearity Test Result

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	PAD (X1)	,490	2,042
	DAU (X2)	,402	2,485
	DAK (X3)	,516	1,939

a. Dependent Variable: Y

Source: Processed from secondary data, 2022

The test results above show that the VIF value < 10 and the tolerance value is greater than 0.1, so it can be concluded that there is no multicollinearity between independent variables

Autocorrelation Test

The autocorrelation test aims to test whether, in the linear regression model, there is a correlation between the driver's error in the T period with the disruptive error in the T-1 period (previously). If there is a correlation, there is an autocorrelation problem (Ghozali, 2013). The method used to detect the presence or absence of autocorrelation is the Durbin-Watson (DW) test.

According to Santoso (2002), the decision-making regarding the presence or absence of autocorrelation is as follows:

- DW numbers below -2 means there is a positive autocorrelation.
- The number D -W between -2 to +2 means no autocorrelation.
- The number D - W above + means a negative autocorrelation.

Table 7. Durbin-Watson Test Result

Model	R	R-Square	Model Summary ^b		
			Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,827 ^a	,684	,680	,26248	,735

a. Predictors: (Constant), Z, X3, X2, X1

b. Dependent Variable: Y

Source: Processed from secondary data, 2022

The table above shows that the Durbin-Watson (DW) value is 0.735, which means that there is no positive and negative autocorrelation (still in the range of numbers D-W -2 and +2).

Heteroscedasticity Test

The heteroscedasticity test aims to test whether there is an inequality of residual variance in the regression model from one observation to another. How to predict the presence or absence of heteroscedasticity can be seen from the pattern of the scatter plot image model and conduct a glesjer test in the regression model (Nugroho, 2005). Suppose the independent variable statistically significantly affects the residual. In that case, the model has a heteroscedasticity problem. Conversely, if the independent variable does not significantly affect the residual, the model does not have a heteroscedasticity problem. The following are the results of heteroscedasticity tests presented in the following table.

Table 8. Glejser Test Results Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,061	,053		1,134	,258
	PAD (X1)	-,029	,028	,073	1,038	,300
	DAU (X2)	,022	,009	,136	2,430	,066
	DAK (X3)	,080	,038	,144	2,107	,096

Source: Processed from secondary data, 2022

Heteroscedasticity test results found that the five independent variables P -Value > 0.05 did not cause heteroscedasticity problems. The significance value of the PAD variable is 0.300. The DAU's significance level is 0.066, while DAK is 0.096. The results above can be concluded that there is no heteroscedasticity.

Hypothesis Testing

Multiple Linear Regression Analysis

Table 9. Results of Regression Analysis Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,551	,210		-12,171	,000
	PAD (X1)	,431	,048	,427	8,895	,000
	DAU (X2)	,459	,077	,254	5,923	,000
	DAK (X3)	-,139	,056	-,097	-2,498	,000

Source: Processed from secondary data, 2022

In data processing using linear regression, testing is carried out to determine the effect

between the independent variable and the dependent variable. The results of the linear regression equation in this study can be seen in the following table:

Based on the table above, the multiple regression model between the independent variable of the dependent variable can be formulated in the equation model as follows:

$$Y = -2.551 + 0.431X_1 + 0.459X_2 - 0.139X_3$$

Simultaneous Significance Test (Test F)

A simultaneous test (F-Test) is carried out to see the effect of independent variables (PAD, DAU, DAK) on the dependent variable (economic growth) together. Based on the results of data processing, the results of statistics are simultaneous, as follows:

Table 10. Simultaneous Significance Test Result ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48,406	4	12,101	175,650	,000 ^b
	Residual	22,391	325	,069		
	Total	70,797	329			

Source: Processed from secondary data, 2022

Partial Test (Test Statistical t)

In testing the partial influence of the independent variable on the dependent variable used, the statistical test t. The t-test results in this study can be shown in the following table:

Table 11. Partial Test Result Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,551	,210		-12,171	,000
	PAD (X1)	,431	,048	,427	8,895	,000
	DAU (X2)	,459	,077	,254	5,923	,000
	DAK (X3)	-,139	,056	-,097	-2,498	,000

Source: Processed from secondary data, 2022

Moderating Variable Regression Analysis-Residual Test

Moderating variable regression analysis with residual tests, moderation variables in this study are capital expenditure. The use of this moderation variable is intended to

prove the hypothesis that the capital expenditure variable is the moderation variable that affects (strengthens or weakens) the relationship between independent variables (PAD, DAU, and DAK) and dependent variables (capital expenditure). Based on the results of the residual test, there are two residual test equations listed in tables 12 and 13 as follows:

Table 12. The Results of The Analysis of The Regression of Moderating Variables-Residual Tests Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6,320	3,065		-2,062	,000
	PAD (X1)	,279	,161	,285	1,435	,000
	DAU (X2)	,253	,401	,113	1,631	,000
	DAK (X3)	-,451	,163	-,332	-2,766	,000

Source: Processed from secondary data, 2022

The table above shows the multiple linear regression equation between independent variables (PAD, DAU and DAK) on moderation variables (capital expenditure) produces the following model equations:
 Expenditure Capital = -6.320 + 0.279PAD + 0.253DAU - 0.451DAK + e

The regression equation shows the lack of fit) in the relationship between local, DAU, and DAK. The regression results are then a residual test to determine whether capital expenditure is a moderation variable. A variable is a moderation variable if the results are significant and have a negative parameter coefficient value (Ghozali, 2013). The residual test results in this study can be seen in the table below.

Table 13. The Results of The Residual Test Analysis of The Moderation Variable

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	,245	,054		4,509	,000
	PDRB	-,040	,011	-,192	-3,766	,000

Source: Processed from secondary data, 2022

The table above shows the residual equation between the dependent variable (economic growth) to the absolute residual value of the moderation variable, namely capital

expenditure, to produce the equation of the residual test model as follows:

$$\epsilon = 0.245 - 0.40 \text{ GRDP}$$

The residual test results above show that the value of the economic growth variable has a sig value of 0.000 < 0.05 and the direction of the parameter coefficient is negative at 0.040. From this residual test, it is concluded that the capital expenditure variable is a moderation variable that can moderate the relationship between PAD, DAU, and DAK to economic growth. In other words, H0 is accepted.

Coefficient of Determination

The coefficient of determination test is used to determine the level of strength of the influence between independent variables on the dependent variable. The results of the calculation of the coefficient of determination can be seen in Table 14 below:

Table 14. Coefficient of Determination Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,827 ^a	,732	,722	,26248

Source: Processed from secondary data, 2022

The coefficient of determination (R²) of 0.732 means that the independent variable (PAD, DAU, and DAK) can explain the dependent variable of economic growth of 73.2%. The remaining 26.8% is explained by other variables not included in this research model, such as SiLPA, investment, financing, etc.

CONCLUSION

Based on the results of research and discussion, the conclusions are as follows:

1. Regional Original Revenue (PAD) positively and significantly affects the regional government economic growth in regencies/cities of North Sumatra Province from 2011-2020.
2. The General Allocation Fund (DAU) positively and significantly affects the regional government economic growth in regencies/cities of North Sumatra Province from 2011-2020.

3. Special Allocation Funds (DAK) negatively and significantly affects the regional government economic growth in regencies/cities in North Sumatra Province from 2011-2020.
4. PAD, DAU, and DAK simultaneously affect the regional government economic growth in regencies/cities of North Sumatra Province from 2011-2020.
5. The capital expenditure variable is a moderation variable that influences the strengthening or weakening of the relationship between PAD, DAU, and DAK to economic growth in regencies/cities of North Sumatra Province from 2011-2020.

SUGGESTION

Based on the results of the research, discussion, and conclusions obtained, the suggestions from this research are as follows:

For academics:

1. Further research to use a longer period and increase the number of regions and research variables to provide more comprehensive conclusions about the factors that affect economic growth.
2. Further research to conduct further analysis to see the cause of the influence of DAK's negative effect on economic growth.

For practitioners:

1. To increase economic growth, the district and city governments in North Sumatra Province must explore more regional potential that can be a source of PAD. Regional financial capacity can be increased by intensification and extensification. Extensification efforts are efforts to expand the types of regional government levies. The intensification effort is to increase the independence of regional income by increasing the performance of regional taxes and regional levies. This effort is carried out by expanding the revenue base, strengthening the collection process, increasing regional revenue

management capacity, increasing supervision, increasing administrative efficiency, and reducing collection costs, increasing revenue capacity. Through good planning, it can increase the awareness of taxpayers/retributions. The local government can allocate the source of income on target following the priorities planned in preparing the RPJMD to increase economic growth.

LIMITATIONS

This study has limitations that can be considered for further research to obtain better results. The following are the limitations of this study:

1. Samples in this study are limited to certain districts/cities with limited data, namely 33 regencies/cities in North Sumatra Province. It causes the research results to only apply to districts/cities that are research samples, so they cannot be generalized to all districts/cities in Indonesia. It is expected that future research can expand or increase research samples.
2. Limited data in this study, so researchers only use variable PAD, DAU, DAK, capital expenditure, and economic growth.

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