



THE INFLUENCE OF REGIONAL INCOME ON ECONOMIC GROWTH OF THE EASTERN COAST OF NORTH SUMATERA PROVINCE

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ABSTRACT

This study aims to determine the effect of Regional Original Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Profit-Sharing Fund (DBH) on economic growth in the eastern coast of North Sumatra province. This study analyzes the Revenue and Expenditure Budget report of the Regency / City Government of North Sumatra Province from the North Sumatra Central Statistics Agency library which is located at Jl. Asrama No. 179 Medan. Data collection was carried out through non-participant observation techniques. Data analysis was performed using descriptive analysis and multiple linear regression. Based on the results of the study, it shows that the Regional Original Revenue (PAD), the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH) have a positive effect on economic growth in the eastern coast of North Sumatra province.

KEYWORDS: *economic growth, regional revenue, eastern coast*

1. INTRODUCTION

Economic growth is a growth rate formed from various economic sectors which indirectly describes the rate of economic growth that occurs. Economic growth is the process of increasing the production capacity of an economy which is manifested in the form of an increase in national income. A country is said to experience economic growth when there is an increase in real GNP in that country. Their economic growth is an indication of the success of economic development. The last fiscal decentralization in Indonesia is regulated by Law Number 2 of 2015 concerning the Second Amendment to Law Number 23 of 2014 concerning Regional Government, as well as Law no. 33 of 2004 concerning Financial Balance between the Central Government and Local Government. In the implementation of fiscal decentralization, it is explained that PAD, DAU, DAK, DBH, regional

loans, and other legal receipts are a source of revenue used for local government funding.

Based on its topography, North Sumatra is divided into 3 (three) parts, namely the eastern part which is relatively flat, the middle part is wavy to hilly and the western part is a wavy plain. The East Coast region, which is a lowland area of 24,921.99 km² or 34.77% of the total area of North Sumatra, is a fertile area with high humidity and relatively high rainfall. This region has high economic potential, so it tends to be denser due to migration flows from the West Coast and highlands. The highland area and the West Coast area covering 46,758.69 km² or 65.23% of the total aPADrea of North Sumatra, which is mostly mountainous, has variations in the level of soil fertility, climate, topography, and contours as well as areas where the soil structure is unstable. Several lakes, rivers, waterfalls, and volcanoes are found in this area and some areas are recorded as areas of tectonic and volcanic earthquakes.



The economic growth of City/Regency Governments in the East Coast Region of North Sumatra Province, namely Asahan Regency, Batubara Regency, Tanjungbalai City, Labuhanbatu Regency, North Labuhanbatu Regency, South Labuhanbatu Regency, Deli Serdang Regency, Langkat Regency, Serdang Bedagai Regency, Tebing

Tinggi City, Medan City, and Binjai City during the period 2014-2018 there were differences between City / Regency Governments, resulting in regional development among the City/Regency Governments that grew slowly and some grew fast, as shown in Table 1.

Table 1
Economic Growth of City / Regency Government of East Coast Region and North Sumatra Province in 2014-2018 (%)

No.	Regency/City	2014	2015	2016	2017	2018
1	Asahan	4.01	5.22	5.53	5.85	5.70
2	Tanjung Balai	4.11	3.54	4.01	4.00	4.17
3	Batubara	5.77	5.96	5.12	5.72	5.36
4	Labuhanbatu	4.39	5.33	5.98	6.04	5.95
5	Labuhanbatu Selatan	6.98	7.76	7.78	6.89	6.55
6	Labuhanbatu Utara	5.28	5.32	5.68	5.54	5.87
7	Deli Serdang	7.51	5.24	5.32	5.10	5.15
8	Langkat	5.12	5.03	4.98	5.05	5.01
9	Serdang Bedagai	5.12	5.05	5.14	5.16	5.17
10	Tebing Tinggi	5.45	4.90	5.11	5.14	5.17
11	Medan	6.08	5.74	6.27	5.81	5.92
12	Binjai	5.83	5.40	5.54	5.39	5.46
13	Provinsi Sumatera Utara	5.23	5.10	5.18	5.12	5.18

Source: Central Statistics Agency of North Sumatra Province

2. RESEARCH METHODOLOGY

This research according to the type of data and analysis can be grouped into quantitative data. To obtain and collect the data needed in the completion of this research, it is obtained from the Regional Government Revenue and Expenditure Budget report of the Regency/City of North Sumatra Province from the North Sumatra Central Statistics Agency library which is located at Jl. Asrama No. 179 Medan. The scope of the research is the City/Regency Government of the East Coast Region of North Sumatra Province which has data on economic growth, PAD, DAU, DAK, and DBH successively from 2009 to 2018 in the thirteen regencies/cities in the East Coast region of North Sumatra Province. The location of the thirteen Regencies / Cities was chosen because it has potential in the fields of food crops and plantations, processing industry, trade, and services as well as ports.

3. LITERATURE REVIEW

Economic growth is one very important indicator in analyzing the economic development that occurs in a country. According to Sirojuzilam and Mahalli (2010), economic growth is a description of the impact of government policies implemented, especially in the economic sector.

According to Jhingan (2010) in the theory of economic development, it is stated that there are six characteristics of economic growth, namely the presence of a high rate of increase in production per capita to compensate for the fast rate of population growth, the increasing rate of production per capita, especially due to improvements in technology and quality of inputs used, changes the economic structure from the agricultural sector to the industrial and service sectors, the increasing number of people moving from rural areas to urban areas (urbanization), economic growth due to the expansion of developed countries and the strength of international relations, the increasing flow of goods and capital in international trade.

The granting of regional autonomy is an effort to empower regions in the context of managing development in their regions, creativity, innovation, and independence are expected to be owned by each region, to reduce the level of dependence on the Central Government. And what is more important is that with the existence of regional autonomy, the quality of services provided by the government to the community will increase, both services that are directly provided to the community and services that are not directly provided, such as the construction of public facilities and other social facilities. In other



words, the provision of public goods (public goods) and public services (service goods) can be more secure (Sun'an and Senuk, 2015)

The term decentralization does not have only one meaning. It can be translated into several meanings, depending on the context in which it is used. Hidayat in Zulyanto (2010) defines decentralization as the sharing of government power between groups of power holders at the center with other groups, where each of these groups has the authority to regulate certain fields within the territorial scope of a country. Mawhood in Zulyanto (2010) clearly states that decentralization is the devolution of power from the central government to regional governments.

In the 1945 Constitution (UUD) governs the power of local governments in the administration of regions. Appropriate financial sources, including PAD, tax and non-tax revenue sharing, loans, as well as subsidies or assistance from the central government, must support fiscal decentralization as the main component of governmental authority decentralization. Accordingly, the implementation of fiscal decentralization has an impact on first of all the allocation of regional finances, which ensures that regions have maximum flexibility or independence in making use of the main sources of funding for developing regions. Second, there is a need for guidance so that fiscal decentralization operates the way planners want. Third, several breakthroughs are needed to get around the fiscal gap by expanding the revenue base. Among other things, identifying potential taxpayers, improving the object database, and calculating the revenue capacity of each levy (Akhmad, 2019).

Original Regional Revenue (PAD) is regional revenue that comes from local taxes, levies, management of separated regional assets, and other legitimate original regional income, which aims to provide opportunities for regions to earn revenue for the implementation of regional autonomy as the embodiment of decentralization (Badrudin, 2011).

The definition of General Allocation Fund (DAU) according to Regulation of the Minister of Finance of the Republic of Indonesia Number 48 / PMK.07 / 2016 concerning Management of Transfers to Regions and Village Funds. General Allocation Fund, hereinafter referred to as DAU, is a fund allocated in the APBN to regions with the aim of equal distribution of inter-regional financial capacity to finance regional needs in the context of implementing decentralization. The Special Allocation Fund (DAK) is one of the central government financial transfer mechanisms to the regions which aims to increase the provision of regional physical facilities and infrastructure according to national priorities and reduce the gap in growth rates between regions and services between fields (Subekan, 2012). Revenue Sharing Funds (DBH) are funds originating from the State Revenue and Expenditure Budget (APBN) that are distributed to regions, taking into account the potential of generating regions to finance regional needs in the direction of decentralization, based on certain percentage figures. Revenue Sharing Funds consist of Tax DBH and Natural Resources DBH (SDA) (Harahap, 2017).

4. RESULT

The capital city of North Sumatra Province is Medan, located between 10 - 40 LU, 980 - 1000 B.T. The borders of the northern province of Aceh and the Sumatra Strait, the west borders the provinces of West Sumatra and Riau, while the east is bordered by the Sumatra Strait. The area consists of the coast and lowlands in the east and west of the province, and uplands in the highlands of Karo, Toba, and Humbang. The mountains include Sibayak, Sinabung, Martimbang, Sorik Marapi, and others. Then the rivers are the Wampu, Batang Serangan, Deli, Asahan, and others.



Figure 1 Regional Map of North Sumatra Province

Before discussing statistical data, it is necessary to first consider the description of the data from the Regency / City Government of the East Coast region and North Sumatra Province which have been determined as samples. The population in this study was 13 samples consisting of 12 Regency / City Governments in the East Coast region of North Sumatra Province, namely Langkat Regency, Binjai City, Medan City, Deliserdang Regency, Serdangbedagai Regency, Tebingtinggi City, Batubara Regency, Tanjungbalai City, Asahan Regency, North Labuhanbatu Regency, Labuhanbatu

Regency, South Labuhanbatu Regency, and 1 North Sumatra Provincial Government.

Based on the research data obtained based on 10 years of data observations, descriptive statistical research data were obtained. From the descriptive statistical research data, it is obtained data that includes n (the amount of data obtained), the average (mean), the standard deviation, the minimum value, and the maximum value for the research variables. These variables include economic growth, PAD, DAU, DAK, and DBH which can be seen in Table 2.

Table 2
Descriptive Statistics Economic Growth Data (%), PAD, DAU, DAK and DBH (in Millions Rupiahs)

		PAD	DAU	DAK	DBH	Pertumbuhan Ekonomi
N	Valid	130	130	130	130	130
	Missing	0	0	0	0	0
	Mean	432.7397	1918.2078	330.7923	169.9858	5.5614
	Median	63.5625	576.6750	67.1900	46.7900	5.4550
	Mode	41.17	367.74 ^a	45.51 ^a	18.62 ^a	5.12
	Std. Deviation	1022.38902	4587.54559	1005.00800	359.58863	.73456
	Range	6494.33	22115.27	6591.58	1604.08	5.11
	Minimum	2.38	158.68	.06	.86	4.11
	Maximum	6496.72	22273.95	6591.64	1604.94	9.22

Table 2 shows descriptive statistical research data on data that includes n (the amount of data obtained), average (mean), standard deviation,

minimum value, and maximum value for research variables including economic growth, PAD, DAU, DAK, and DBH.



Table 3
Average PAD, DAU, DAK, DBH and Economic Growth of 13 Regency/City Governments in Eastern Region and Province of North Sumatra for the Period of 2009-2018

No.	Regency/City	PAD (in Millions Rupiahs)	DAU (in Millions Rupiahs))	DAK (in Millions Rupiahs)	DAK (in Millions Rupiahs)	Economic Growth (%)
1	Labuhanbatu	95.445	517.516	82.350	47.365	5.32
2	Asahan	69.371	718.843	142.005	56.462	5.46
3	Batubara	35.434	503.376	67.050	25.313	4.53
4	Labuhanbatu Selatan	28.182	393.813	74.151	50.000	5.50
5	Labuhanbatu Utara	26.507	450.686	46.418	32.826	5.63
6	Tanjung Balai	41.589	349.781	48.527	16.876	5.57
7	Deli Serdang	454.491	1204.254	208.460	86.543	5.97
8	Langkat	92.742	951.762	159.758	153.022	5.46
9	Serdang Bedagai	75.118	617.900	130.238	41.901	5.57
10	Tebing Tinggi	63.015	343.804	60.769	17.965	5.52
11	Medan	1290.772	1293.955	126.874	240.973	6.43
12	Binjai	69.204	457.966	57.333	57.446	5.73
13	Provinsi Sumatera Utara	3283.747	17133.039	3088.711	1383.120	5.62
	Mean	432.740	1918.207	330.203	169.986	5.56

Source: Central Statistics Agency of North Sumatra Province

Based on Table 3 above, shows that the Medan City Government had the highest average economic growth during the 2009-2018 period, namely 6.43%, followed by the Deli Serdang Regency Government at 5.97%, and the Binjai City Government at 5.73%, meanwhile, Batubara Regency Government has the lowest economic growth, which is 4.53%. The average results above show that the Medan City Government has the highest economic growth and the Batubara Regency Government has the lowest economic growth, which shows that the level of development in Medan City is higher than

that of Batubara Regency so that the factors that affect economic growth are more likely to be implemented in Medan City such as There are investors who invest their funds in the hotel, restaurant, and trade sector, the manufacturing sector, the building sector, and the services sector.

The average results of the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH) during the 2009-2018 period show that the North Sumatra Provincial Government has the highest value.

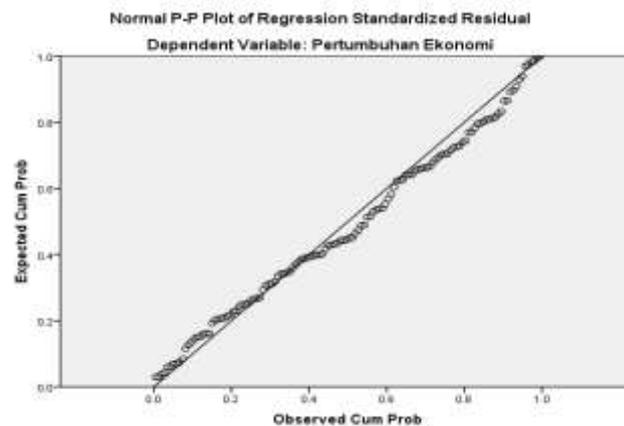


Figure 2 Normal P-Plot of Standardized Residual Regression

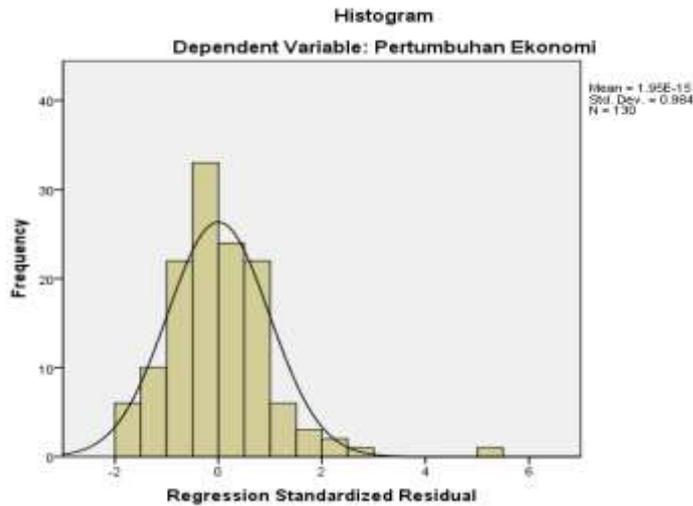


Figure 3 Economic Growth Histogram

The results of the histogram graph in Figure 3 show that the residual data is normally distributed as seen from the almost perfect (symmetric) bell-shaped image.

**Table 4
 Kolmogorov-Smirnov test results**

		Unstandardized Residual
N		130
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.65016248
Most Extreme Differences	Absolute	.065
	Positive	.065
	Negative	-.044
Kolmogorov-Smirnov Z		.739
Asymp. Sig. (2-tailed)		.645

a. Test distribution is Normal.
 b. Calculated from data.

Source: Primary data processed, 2020

The statistical test results in the table above show that the Kolmogorov-Smirnov Z value is 0.739 and the significance is at 0.645 and the value is above $\alpha = 0.05$ (Asymp. Sig = 0.645 > 0.05) so that the H_0 hypothesis is accepted, which means that the residual data is normally distributed.

**Table 5
 Multicollinearity Test Results**

Model	Collinearity Statistics	
	Tolerance	VIF
PAD	.238	4.200
DAU	.109	9.163
DAK	.345	2.899
DBH	.286	3.499

a. Dependent Variable: Pertumbuhan ekonomi
 Source: Primary data processed, 2020

The VIF value <10 in the table variable above does not occur symptoms of multicollinearity and the values obtained from the calculation are following the VIF value and tolerance, it can be concluded that the independent variable does not occur multicollinearity so that the model meets the requirements of the classical assumptions in regression analysis

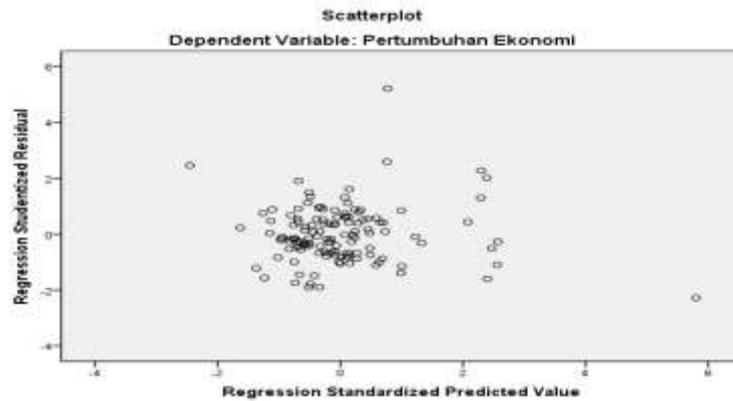


Figure 4 Graph of Economic Growth Scatterplots

Scatterplots graph in Figure 4 shows that there is no heteroscedasticity in the regression model. So it can be concluded overall that the regression

model meets the requirements of the classical assumption test.

Table 6
Result of Determination Coefficient Test (R²)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.465 ^a	.217	.192	.66048

a. Predictors: (Constant), DBH DAK, DAU, PAD

b. Dependent Variable: Economic Growth

Source: Primary data processed, 2020

The result of the calculation of the value of R Square is 0.217. This result means that 21.7 percent of economic growth can be explained by the four independent variables above (PAD, DAU, DAK, and

DBH), while the remaining 78.3 percent is explained by other variables not included in this study, such as government spending, inflation, and population.

Table 7
Simultaneous Test Results (Test F)

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	15.076	4	3.769	8.640	.000 ^a
Residual	54.530	125	.436		
Total	69.606	129			

a. Predictors: (Constant), DBH, DAU, PAD, DAK

b. Dependent Variable: Economic Growth

Source: Primary data processed, 2020

The simultaneous statistical test shows the probability level of 0.000, it can be concluded, $P = 0.000 < \alpha = 0.05$, which means that H_a is accepted. This means that the independent variables PAD,

DAU, DAK and DBH simultaneously have a significant effect in influencing economic growth.



Table 8
Partial Test Result (t test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.864	.586		10.002	.000
PAD	.552	.171	.523	3.223	.002
DAU	-.257	.391	-.157	-.656	.513
DAK	-.661	.163	-.548	-4.067	.000
DBH	.355	.197	.267	1.800	.074

a. Dependent Variable: Economic Growth

Based on Table 8 and the description above, the multiple regression equation can be formulated as follows:

$$Y = 5,864 + 0,552 X_1 - 0,257 X_2 - 0,661 X_3 + 0,355 X_4$$

The multiple regression equation model means:

1. The constant value is 5.864 which means that if there is no independent variable value, in this case, the PAD, DAU, DAK, and DBH variables are equal to 0 (zero) then the value of economic growth will be 5.864 percent.
2. Variable PAD (X_1) = 0.552. The PAD variable which is positive means that it has a unidirectional influence, which means that each addition or increase in the log of the PAD variable will add to the value of economic growth by 0.552 percent.
3. DAU variable (X_2) = -0.257. The DAU variable which is negative means that it has a non-directional effect, which means that each addition or increase in the log of the DAU variable will reduce the value of economic growth by 0.257 percent.
4. The variable DAK (X_3) = -0.661. The DAK variable which has a negative sign means that it has a unidirectional influence, which means that each addition or increase in the log of the DAK variable will decrease the value of economic growth by 0.661 percent.
5. Variable DBH (X_4) = 0.355. The DBH variable which has a positive sign means that it has a unidirectional influence, which means that each addition or increase in the log of the DBH variable will add to the value of economic growth by 0.355 percent.

5. DISCUSSION

The DAU variable has no and insignificant effect on the economic growth of the East Coast region of North Sumatra Province. The results of this study are in line with the research of Rahmah and Zein (2016) and the research of Abdullah, Mawarni, and Dawarnis (2013) that the general allocation funds have a positive effect on economic growth. The DAK

variable has no and significant effect on the economic growth of the East Coast region of North Sumatra Province. The results of this study are in line with Siswiyanti's (2015) research which proves that DAK has no effect on economic growth and research by Anwar, et al., (2016) which concluded that DAK does not affect economic growth in Manado City in 2001-2013, as well as Jannah and Nasir (2018), which proves that DAK does not affect economic growth in Aceh Province in 2008-2014. The DBH variable has a positive and insignificant effect on the economic growth of the East Coast region of North Sumatra Province. The results of this study are in line with research by Nisa (2017) which shows that DBH has a positive effect on economic growth regency/cities in East Java Province 2011-2015. The variables PAD, DAU, DAK, and DBH simultaneously have a positive and significant effect on economic growth in the East Coast Region of North Sumatra Province. The results of this study are in line with the research of Rahmah and Zein (2016) which proves that PAD, DAU, and DBH simultaneously have a positive effect on economic growth in Aceh Province. One of the goals of regional development is to increase economic growth. Economic growth is related to the process of increasing the production of goods and services in people's economic activities and it can be said that economic growth involves single-dimensional development and is measured by an increase in production and income. Economic growth is a problem for a country's economy in the long run. Economic growth measures the performance of an economy's development from one period to the next. An economy is said to experience growth if the level of economic activity achieved now is higher than that achieved in the previous period. Growth is achieved when the physical quantity of goods and services produced in the economy increases in size from previous years.

Regional autonomy aims to improve the welfare of the people. With efforts to accelerate economic growth and regional development, reduce disparities between regions, and improve the quality



of public services to make them more efficient and responsive to the needs, potentials, and characteristics of each region. For this purpose, improving the quality of decentralized government affairs, through increasing the rights and responsibilities of local governments to manage and manage their household affairs.

The implementation of regional autonomy by regencies/cities does not mean that all regions can rapidly promote regional development and reduce gaps between regions. For regions rich in natural resources, human resources, good infrastructure, which can take advantage of the decentralization of government affairs to improve the welfare of their people. Meanwhile, regions that are poor in natural resources, low quality of human resources, and poor infrastructure, cannot take advantage of the opportunity for autonomy as a means of improving people's welfare.

Regional Original Revenue (PAD) is an important indicator to assess the success rate of implementing autonomy. The amount of PAD contribution in the APBD is a measure of the success of the implementation of development, improving services, and increasing the welfare of the community. All autonomous regions should be able to increase the contribution of PAD in the Regional Revenue and Expenditure Budget (APBD) because the formation of autonomous regions is based on the potential that is assumed to increase the welfare of the community.

6. CONCLUSION

1. Regional Original Revenue (PAD) has a positive and significant effect on economic growth in the East Coast region of North Sumatra Province.
2. The General Allocation Fund (DAU) has a negative and insignificant effect on the economic growth of the East Coast region of North Sumatra Province.
3. The Special Allocation Fund (DAK) has a negative and significant effect on the economic growth of the East Coast region of North Sumatra Province.
4. Revenue Sharing Fund (DBH) has a positive and insignificant effect on economic growth in the East Coast region of North Sumatra Province.
5. PAD, DAU, DAK and DBH simultaneously have a significant effect on the economic growth of the East Coast region of North Sumatra Province.

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