

The Influence of Export, Government Expenditure, and Labor Force to Economic Growth in North Sumatera

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Abstract: Economic growth is one of the most important factors to measure the success of economic development. The aim of economic development is to achieve high economic growth, maintain price stability, and overcome unemployment problems, maintain balance of payments balance and distribute income more equitably and evenly. The purpose of this study was to look at the effects of exports, government spending, and the workforce that worked on economic growth in North Sumatera during the period 2003-2017. This study uses secondary data obtained directly from Badan Pusat Statistik and department or agency concerned. The analysis used descriptive quantitative analysis of Ordinary Least Square (OLS). In this study using Eviews 9 as an estimation tool. The regression showed that the Export is not significant positive effect on the economic growth, Government Expenditure is significantly positive effect on the economic growth, and Labor Force is significantly positive effect on the economic growth. Then the relationship between the Export, Government Expenditure, and the Labor Force with Economic Growth of 98.03% and 1.97% is explained by other factors not mentioned in this model.

1 INTRODUCTION

Economic growth is one of the most important factors to measure the success of economic development. Economic growth shows the extent to which economic activity is able to generate additional income in a certain period (Sukirno: 2008).

Economic growth is the development of economic activities that have an impact on increasing the amount of production of goods and services produced by the community, and encourages the increasing prosperity of the community. Increased economic growth is a top priority for regional governments. In the success of economic growth, employment opportunities, reducing poverty, improving nutrition and health, including education will improve.

Positive economic growth shows that people who are in a country have been able to fulfill their basic needs and have even been able to obtain welfare. In contrast, declining economic growth shows that the

condition of people's welfare also declined in the country.

The aim of economic development is to achieve high economic growth, maintain price stability, and overcome unemployment problems, maintain balance of payments balance, and distribute income more equitably and evenly. According to Todaro (2000), development must be interpreted as a multidimensional process involving major changes in social structure, familiar mental attitudes and national institutions including acceleration (acceleration of economic growth, reduction of inequality and the eradication of absolute poverty).

According to Simon Kuznets, economic growth is a long-term increase in the ability of a country to provide more economic goods to its population. Based on the open economy concept, where economic growth is an aggregate of household sector consumption, investment, government sector expenditure, and foreign trade in the import-export sector ($Y = C + I + G + NX$).

North Sumatera is one of the largest provinces in Indonesia and has abundant potential resources. Below is presented data on the comparison of North

Sumatra's economic growth with Indonesia's economic growth during the 2011-2017 period.

Table 1: Comparison of North Sumatra's economic growth with Indonesia's economic growth

Years	North Sumatera Economic Growth (%)	Indonesian Economic Growth (%)
2011	6.63	6.44
2012	6.45	6.19
2013	6.07	5.56
2014	5.23	5.02
2015	5.10	4.79
2016	5.18	5.02
2017	5.12	5.10

From Table above, it can be seen that the economic growth of North Sumatera has decreased from year to year unless it is known that 2016 has increased. The economic performance of North Sumatera in 2016 when compared to 2015, grew by 5.18%. the increase was due to the fact that most businesses also experienced good growth. However, North Sumatera's economic growth is above the average economic growth in Indonesia.

In 2016 North Sumatera's export volume reached 8.39 million tons with exports reaching US \$ 7.77 billion. The main export commodity of North Sumatera is vegetable oil and animal fats which reached US \$ 2.99 billion (38.48% of the export value of US \$ 7.77 billion)

North Sumatera is the fourth province with the largest population in Indonesia after West Java, East Java and Central Java. According to the results of the census carried out in 2010 in May, the population of North Sumatera reached 12,982,204 people with population coverage reaching 188 people per km². The population growth rate of North Sumatra during the period of 2000-2010 reached 1.12% per year. The labor force participation rate in North Sumatera shows fluctuations.

2 THEORETICAL FRAMEWORK

Economic growth

Harrod-Domar's theory in Dornbusch and Fisher (2004) this economics theory analyzes the relationship between growth level and inflation level. The idea is that at a certain level of national income is sufficient to absorb all workers, with wage level in the next period would no longer sufficient to absorb all the existing all workers. The occurs because of the additional production capacity in the initial period and available in the following period. Thus required the additional funds to achieve the absorption level of full employment in the next

periode, by calculating the relationship between capital (capital stok = K), with the production result (output = Y), or with a capital output ratio (COR).

Economic growth is one of the most important indicators in carrying out an analysis of economic development that occurs in a country. Economic growth is one process where the production capacity of an economy increases over time to produce increasingly large levels of income (Todaro: 2006).

According to Lincoln Arsyad (2010), economic growth is an increase in GDP / GNP regardless of whether the increase is greater or smaller than the population growth rate, or whether changes in economic structure occur or not.

According to Sukirno, (2004), that economic growth explains or measures the achievement of the development of an economy, whereas in macroeconomic analysis the level of economic growth achieved by a country is measured by the development of real national income achieved by a country.

Export

In macroeconomic theory, the relationship between exports with the level of economic growth or national income is an identity equation because exports are part of the national income level (Oiconta, 2006). From the point of the expenditure, exports are one of the most important factors in the Gross National Product (GNP) so that with a change in the value of exports, in income of te community directly will also undergo changes. On the other hand, higher a country's exports would cause the economy will be very sensitive to the fluctuations in the international markets and the world economy (Irham and Yogi, 2003).

Exports are an outflow of goods and services from one country to the international market. Exports occur because the need for certain goods or services is sufficient in the country or because the production of goods / services can be competitive both in price and quality with similar products in the international market.

According to Todaro (2006), exports are international trade activities that provide stimuli to foster domestic demand which causes the growth of large industries, along with a stable political structure and flexible social institutions. In other words, exports reflect trade activities among nations that can provide a boost in the dynamic growth of international trade, so that a developing country is likely to achieve economic progress as well as with more developed countries.

Government Expenditures

According to Guritno (2001), government expenditure is the value of spending carried out by

the government that is used for the benefit of the community. Government expenditure reflects government policy, where if the government has written a policy to buy goods and services, government expenditure reflects the costs that must be spent by the government to implement the policy.

Government routine expenditures are expenditures for the maintenance or administration of daily government. Included in routine expenditure are employee expenditure, goods expenditure, autonomous regional subsidies, interest and other debt repayments.

Development expenditure is an expenditure intended to finance development programs, so that the budget is always adjusted to funds mobilized. These funds are then allocated to various fields in accordance with the priorities planned in Repelita. In addition to financing sectoral expenditures through development departments or agencies, it also finances regional special projects known as the Inpres (Presidential Instruction) projects, both carried out by the center and each region.

Labor Force

According to Todaro (2000), population growth and labor force growth is traditionally regarded as one of the positive factors that accelerate economic growth. The greater amount of labor means will increase the level of production, while the greater population growth means a larger size of its domestic market.

Lewis in Todaro (2004) the homogeneous and unskilled labor force is considered to be able to move and shift from the traditional sector to the modern sector smoothly and in limited quantities. These circumstances, labor supply contains a high elasticity. Increased demand for labor (from the traditional sector) root in the expansion of modern sector activities. Thus one of the factors that influence the economic growth is labor.

Conceptual framework

Based on the above theoretical concepts, the conceptual framework of the research can be described, namely:

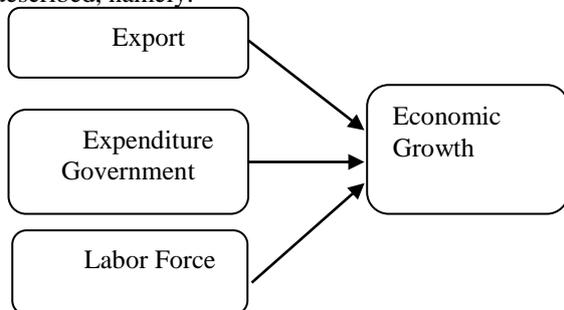


Figure 1: Conceptual Framework

Hypothesis

The hypothesis is a temporary answer to an existing problem. This means that the existing hypothetical does not mean the final answer, but becomes a temporary conclusion that must be tested with data that has a relationship, or by looking at the facts that occur in the field.

The hypotheses in this study are:

- a. Exports have a positive effect on North Sumatera's economic growth
- b. Government spending has a positive effect on North Sumatera's economic growth
- c. The labor force that works has a positive effect on the economic growth of North Sumatera

3 RESEARCH METHOD

This study focuses on the economic growth of North Sumatera Province. Where the independent variables are exports, government expenditure, and labor force. Whereas GDP at the constant price of 2010 is the dependent variable.

The type of data used in this study is secondary data in the form of quantitative time series, namely data in the form of numbers and data sources obtained through the report of the Central Sumatera Provincial Statistics Agency (BPS), Bank Indonesia and other supporting data obtained from journals, books and previous research.

The operational limits of this research are carried out by observing the effect of exports, government spending and the labor force on economic growth in North Sumatera. The data analysis method used in this study is the Ordinary Least Square (OLS) method. Where this method is used to obtain estimates from a regression line by minimizing the number of squares of errors for each observation of the line (Kuncoro, 2007). This method is used in analyzing the effect of independent variables on the dependent variable with the following equation:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e$$

Where :

- α = constant
- $\beta_1, \beta_2, \beta_3$ = coefficient of each variable
- X_1 = export
- X_2 = government expenditure
- X_3 = labor force
- e = error term

4 ANALYSIS

1. Linear regression

From the results of multiple linear regression analysis using the OLS method, an equation model

can be drawn for the effect of exports, government expenditure, and the labor force on economic growth in North Sumatra.

Table 2 : The Results of Linear Regression Analysis

Dependent Variable: PDRB				
Method: Least Squares				
Date: 11/24/18 Time: 19:52				
Sample: 2003 2017				
Included observations: 15				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	35597.71	64772.97	0.546258	0.5173
EKSPOR	242.4329	240.2548	1.009066	0.3246
AK	0.039310	0.015365	2.558381	0.0266
PP	21.50248	2.062032	10.91277	0.0000
R-squared	0.980399	Mean dependent var		323022.8
Adjusted R-squared	0.972768	S.D. dependent var		82517.87
S.E. of regression	13617.13	Akaike info criterion		22.09922
Sum squared resid	2.04E+09	Schwarz criterion		22.28804
Log likelihood	-161.7442	Hannan-Quinn criter.		22.09721
F-statistic	167.7021	Durbin-Watson stat		1.741370
Prob(F-statistic)	0.000000			

Based on the data obtained from the results of the research and the data that has been processed using the Eviews 9 program, the regression results can be obtained as follows:

$$Y = 35597.71 + 242.4329 X_1 + 22.50248 X_2 + 0.039310 X_3$$

From the regression equation above, an interpretation of the model can be made as follows:

a. The regression coefficient for the export variable is 242.4329, so it can be said that the export variable has a positive effect on economic growth in North Sumatra. Judging from the probability value of 0.3246 where the probability value $> \alpha = 0.05$, it can

be stated that the export variable does not significantly influence economic growth in North Sumatra.

b. Regression coefficients for government expenditure variables are 22.50248, it can be said that government expenditure variables have a positive effect on economic growth in North Sumatra. Judging from the probability value of 0.0000, because the probability value is $< \alpha = 0.05$, it can be stated that the variable government expenditure has a significant effect on economic growth in North Sumatra.

c. The regression coefficient for the labor force variable (AK) is 0.039310, it can be stated that the labor force variable has a positive effect on

economic growth in North Sumatera. Judging from the probability value for this variable is 0.0266, because the probability is $< \alpha = 0.05$, it can be stated that labor force variables significantly influence economic growth in North Sumatera.

2. Determination Coefficient (R-Square / R²)

Table 3 : The Results of R-Square

R -Square	Adjusted R-Square
0.980399	0.972768

Based on the table above, the value of R² is 0.980399. this indicates that the independent variables together were able to give an explanation of the dependent variable at 98.03%. The 1.97% is explained by other variables outside the model.

3. T-test (Partial Test)

Table 4: The Results of T-Test

No	Explanation	t-count	Sig.
1	Export	1.009066	0.3246
2	Government Expenditure	10.91277	0.0000
3	Labor Force	2.558381	0.0266

4. F-Statistic Test (Overall Test)

This test looks at how much influence the variable X1 (Export), X2 (Government Expenditures), and X3 (Labor Force that works) together on variable Y (Economic Growth North Sumatera).

Table 5: The Result of F-Statistic Test

F-count	Sig
167.7021	0.0000

Based on the results of the regression model analysis above, it can be seen that F-count > F-table (167.7021 > 3.20), then Ho is rejected and Ha is accepted. This means that together the variables of Export, Government Expenditures and Labor Force that work significantly influence the Economic Growth of North Sumatera at $\alpha = 5\%$.

5 CONCLUSION

1. Export has a positive and insignificant effect on economic growth in North Sumatera. Where every increase of Rp. 1 billion total exports resulted in

an increase in economic growth of Rp. 242.4329 billion assuming ceteris paribus.

2. Government expenditure has a positive and significant effect on economic growth in North Sumatera. Where every increase of Rp. 1 billion total government expenditure resulted in an increase in economic growth of Rp. 22.50248 billion assuming ceteris paribus.
3. The labor force that works has a positive and significant effect on economic growth in North Sumatera. Where each increase of 1 laborforce that work is resulting in an increase in economic growth of Rp. 0.039310 billion assuming ceteris paribus.

6 RECOMMENDATION

Seeing the condition of Indonesia's economic growth, especially North Sumatera, so that it will improve in the future, the authors provide the following suggestions:

1. In increasing economic growth in North Sumatera, macroeconomic indicators such as exports, government expenditures and the labor force must also improve.
2. In supporting export growth, government and private financial institutions must be able to channel loans to the right real sectors, especially the agricultural sector, small and medium industries, and other sectors that are export-oriented.
3. In improving the quality of the labor force, government and private institutions must be able to provide training and experience to the laborforce so that their production results are more productive.

REFERENCES

Badan Pusat Statistik Provinsi Sumatera Utara, (2007). Provinsi Sumatera Utara Dalam Angka Tahun 2007.
 Dornbusch, R.and S.Fisher. (2004).Macroeconomics. 6th Edn., New York: McGraw-Hill. Inc.
 Guritno, Mangkoesobroto. (2001).Ekonomi Publik. Yogyakarta: BPFE.
 Irham and Yogi. (2003). Ekspor di Indonesia, Pustaka Binaman,Cetakan Pertama. Jakarta: Pressindo.
 Kuncoro, Mudraejad. (2007). Metode Kuantitatif Teori dan Aplikasi Untuk Bisnis danEkonomi. Yogyakarta: UPP STIM YKPN.

- Oiconta, N. (2006). Analisis Ekspor dan Output Nasional di Indonesia: Periode 1980-2004 Kajian Tentang Kausalitas dan Kointegrasi. Thesis. Universitas Indonesia, Jakarta.
- Sukirno, Sadono. (2004). Makroekonomi Teori Pengantar. Jakarta: PT. Raja Grafindo Persada.
- Sukirno, Sadono. (2008). Makroekonomi Teori Pengantar. Jakarta: Rajawali Pers.
- Todaro, M.P dan Smith. (2000). Pembangunan Ekonomi di Dunia Ketiga Edisi VIII. Jakarta: Erlangga.
- Todaro, M.P. (2004). Pembangunan Ekonomi. Haris Munandar. Jakarta: Erlangga.
- Todaro, M.P dan S.C Smith. (2006). Pembangunan Ekonomi Edisi ke Sembilan. Jakarta: Erlangga..

