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UNEMPLOYMENT, POVERTY AND INCOME INEQUALITY IN NORTH SUMATRA PROVINCE

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Abstract*. This study aims to determine how much influence unemployment and poverty have on the level of income inequality in North Sumatra Province. This research is a quantitative research using data analysis techniques Panel Data Regression with Random Effect Model. The data period used in the study is from 2017 - 2021 sourced from the Central Bureau of Statistics for North Sumatra Province. The results of this study are that unemployment has a positive and significant effect on income inequality in 33 districts/cities of North Sumatra province. Poverty has a negative and insignificant effect on income inequality in 33 districts/cities of North Sumatra province. Unemployment and poverty have a significant effect on income inequality.*

Keywords*: Income Inequality, Poverty, Unemployment*

INTRODUCTION

Development is multidimensional involving various fundamental changes in social structure, social behavior and social institutions, in addition to accelerating economic growth, equalizing income inequality, eradicating poverty and people's welfare (Todaro, 2004).

According to Todaro (2004), inequality has both positive and negative impacts. The positive impact of inequality is that it can encourage other less developed and developing regions to be able to compete and increase their growth in order to improve their welfare. Meanwhile, the negative impacts of extreme inequality include economic inefficiency, weakening social stability and solidarity, and high inequality is generally seen as unfair to the welfare of society.

Income inequality indicates the distribution of income per capita between groups of people. the share of income received by the high-income population is much larger. Besides that, it was also strengthened by a much higher rate of economic growth. This process has caused the rich to get richer and the poor to get poorer.

Patterns of income distribution that are more equitable are more capable of acting as indicators of the level of welfare of the population. On the other hand, the pattern of equal distribution of income without high economic growth is more appropriately called poverty distribution than welfare distribution.

Thus, both the factor of high economic growth and an increasingly equitable distribution of income, the many policies in this regard are certainly not easy. at the beginning of the process of reducing unemployed people and poor people, the government must pay close attention to it, such as opening jobs according to the skills or abilities possessed by each member of the community. Poverty is no longer understood only as an economic disability, but also a failure to fulfill basic rights.

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The province of North Sumatra is growing rapidly and the division of districts/cities has increased the number of districts/cities to 33 consisting of 25 districts 8 cities, 444 sub-districts and 6,110 villages/wards with the provincial capital city of Medan.

Poverty alleviation methods also require proper analysis, involving all components of the problem. A number of variables can be used to track poverty issues, and from these variables a series of strategies and policies for poverty reduction are produced which are right on target and sustainable. From the educational dimension, for example, low education is seen as a cause of poverty, so many people will be unemployed because they cannot master anything that becomes their job due to the lack of educational knowledge they get. So it is hoped that the government will also conduct training to train the ability of the community so that the community can better master the jobs they will get.

Likewise with economic growth in North Sumatra which has increased. However, the economic growth which has increased has not been followed by an even distribution of income in North Sumatra. Based on the results of the analysis, the inequality of income distribution in North Sumatra is increasing, although not as big as the inequality of income distribution in Indonesia 0.314.

Table 1. Income Inequality in North Sumatra

Year	Total income inequality (%)
2019	0,315
2020	0,316
2021	0,314

Source : Central Bureau of Statistics North Sumatra

Based on the table above it can be seen the total income inequality levels in North Sumatra Province from 2019-2021 experience changes every year. Judging from the data in the table above, it can be seen that the level of income inequality from 2019-2021 has decreased. This is a good indicator of development in terms of the balance of unemployment and poverty in North Sumatra Province in the last three years.

Unemployment is when a person is not working or looking for a job, unemployment itself occurs due to a lack of available jobs, meaning that the number of workers is greater than the available jobs. so that people are confused about wanting to find work. The main impact of unemployment is lowering per capita income. The Central Statistics Agency (BPS) stated that the unemployment rate in Indonesia as of August 2021 was 6.32%. so if many people are unemployed it will greatly affect per capita income and will reduce each person's income, the amount of training for each generation will greatly affect the skills of each community

Unemployment will be a separate burden, not only for the government, but It also has an impact on families, the environment, and so on. In addition, a high unemployment rate in a country can also increase the number of crimes, increase social unrest, and increase poverty and reduce the quality of human development in a country. When examined further, from an economic standpoint, unemployment is a product of market

failure in providing jobs that match the needs of the workforce, or in other words the number of jobs is far less than the number of available workforce**.**

Table 2. Open Unemployment Rate of North Sumatra Province

Year	Total Open Unemployment (%)
2018	5,56
2019	5,41
2020	6,91
2021	6,32

Source : Central Bureau of Statistics North Sumatra

Based on the table above it can be seen the total The open unemployment rate in North Sumatra Province from 2018-2021 has changed every year. The number of unemployment rates changes every year in the price of goods from 2018-2021, namely in 2020 of 6.91, which is the highest unemployment rate. Meanwhile, the lowest unemployment rate occurred in 2019, namely 5.41. Judging from the data in the table above, it can be seen that the open unemployment rate from 2018-2021 has increased, only in 2020 which has experienced a very large increase. This is an indicator of failure in development in terms of employment compared to the number of poor people in North Sumatra.

Poverty is one of the fundamental issues that is the center of attention of the government in any country. Poverty is a problem that has even been experienced even today in all countries of the world. Various efforts have been made, starting from the regional, regional and national and international scope, poverty is a lack of goods and services needed to achieve a decent standard of living.

Often the problem of poverty arises together with the problem of unemployment. These two problems are closely related and have an important influence on income inequality with low levels of education, health so that a person is limited in finding work.

The impact of poverty that occurs is the increase in the unemployment rate in Indonesia, the emergence of various health problems in society and the declining quality of the nation's next generation.

Table 3. Development of the Number of Poor Population in North Sumatra Province (2018 – 2021)

Year	Poor Population (%)
2018	9.22
2019	8.83
2020	8.75
2021	8.49

Source : Central Bureau of Statistics North Sumatra

Based on the table above it can be seen that the decrease in the number poor population in North Sumatra during 2018-2021 and experienced an increase in the

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number of poor people in 2018. In 2021 the poor population in North Sumatra has decreased and that is a good thing for the future the number of poor people in North Sumatra will decrease in 2021 . However, the decrease in the number of poor people still cannot solve the problem of poverty in North Sumatra.

From the explanation of the background above, this is what makes researchers want to know more clear and real information as well as scientific evidence regarding how to analyze the effects of unemployment and poverty on income inequality in North Sumatra Province

THEORETICAL STUDY

The Theory of Unemployment

According to (Suparmoko 2007) unemployment is the inability of the workforce to obtain jobs according to what they need or want. So it can be concluded that unemployment is a condition in which someone who is already in the labor force has not found a job and is trying to find work.

According to (Wardiansyah 2016) that unemployment can occur due to an imbalance in the basic workforce. Unemployment is the inability of the workforce to get jobs according to what they need or want. got a job and trying to find a job.

Unemployment is a process of groups or individuals in the labor force who find jobs but have not got them. For many people, losing a job means a lower standard of living (Ariadi & Muzdalifah, 2020).

Poverty Theory

Poverty is a condition where there is a shortage of things that are usually owned such as food, clothing, shelter and drinking water, these things are closely related to quality of life.

According to the Central Statistics Agency (BPS) poverty is the inability to meet the minimum standards of basic needs which include food and non-food needs. Meanwhile, according to Bappenas poverty is a condition where a person or group of people is unable to fulfill their basic rights to maintain and develop a dignified life.

Friedman views poverty as an inequality of opportunities to formulate social power in the form of assets, financial resources, socio-political organizations, social networks, goods or services, knowledge and skills, and information (Machmud, 2016).

Income Inequality Theory

The income gap can be interpreted as the difference in economic prosperity between the rich and the poor. This is reflected in the difference in income. The problem of income inequality is often summarized, that the real income of the rich continues to increase while that of the poor continues to decrease. This means that the real income from the rich grow faster than the poor,

the income gap is the difference in the amount of income received by the community, resulting in a greater difference in income between groups in the community. As a result of this difference, a gap will be seen, namely the rich will get richer and vice versa, the poor will get worse.

Inequality in income distribution itself can occur between sectors and between regions. According to Myrdall, Inequality in Income Distribution occurs because of the strong back-effect and weak spreading effects in developing countries. If we analyze the

determining factors regarding the unequal distribution of income, it is the distribution of productive and productive wealth or assets such as land and capital in different segments in third world societies which generally causes a huge difference in income between the rich and the poor or between groups and layers of society.

RESEARCH METHOD

The type of research used is quantitative research using the variables of unemployment, poverty and income inequality. The type of data source used in this research is secondary data in the form of Panel Data in the 2017-2021 period. The data was obtained from various sources such as the Central Bureau of Statistics (BPS) for North Sumatra Province, journals and research results. The data collection technique used was field studies and documentation. The data analysis technique uses panel data regression analysis to find out how much influence the independent variable has on the dependent variable. The following is the equation:

$$\mathbf{Yit = a + b_1X_{1it} + b_2X_{2it} + e}$$

Keterangan :
a = constant
b_1 – b_2 = Coefficient of the independent variable
Y = Income inequality (in percent %)
X_1 = Unemployment (in percent %)
X_2 = Poverty (in percent %)
e = tern error

RESULTS AND DISCUSSION

Berdasarkan hasil perhitungan dalam penelitian ini, pertama kali dilakukan uji asumsi klasik, yaitu:

a. Classical Assumption Test

1. Normality test

In this study, the normality test for residuals used the Jarque-Bera (JB) test. In this study, the significance level used is $\alpha = 0{,}05$.

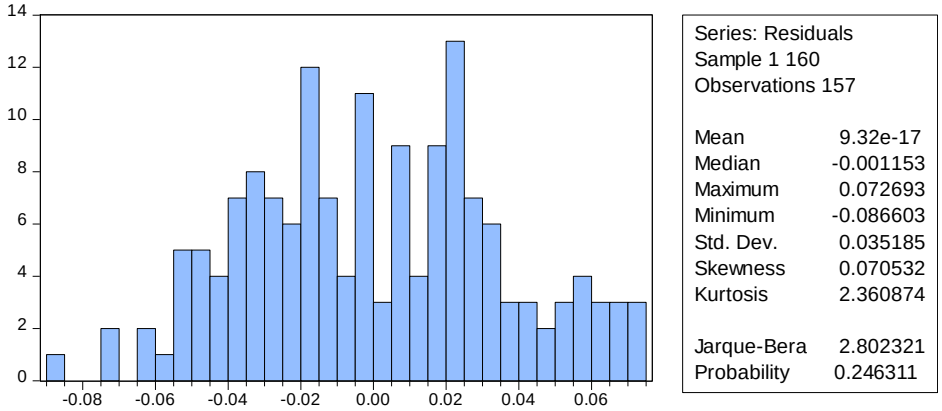

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Figure 1. Normality test with Jarque-Bera test

The probability value of the JB statistic is 0.246311. Because the probability value, which is 0.246311, is greater than the significance level, which is 0.05. This means that the normality assumption is met.

2. Multicollinearity Test

In this study, multicollinearity symptoms can be seen from the VIF value. Ghozali (2013) states that if the VIF value is > 10, this is an indication of multicollinearity. The results of the multicollinearity test are presented as follows:

Table 4. Multicollinearity Test with VIF

Variabel	VIF
X1	1,118372
X2	1,118372

Source: Output Eviews 10

Based on Table 4. the results of the multicollinearity test, it can be concluded that there are no signs of multicollinearity between the independent variables. This is because the VIF value <10 (Ghozali, 2013).

3. Autocorrelation Test

Assumptions regarding the independence of the residuals (non-autocorrelation) can be tested using the Durbin-Watson test. Statistical values of the Durbin-Watson test range between 0 and 4. Statistical values of the Durbin-Watson test that are less than 1 or greater than 3 indicate autocorrelation.

Table 5. Autocorrelation Test with Durbin-Watson

Log likelihood	303.2268	Hannan-Quinn criter.	-3.800827
F-statistic	25.73166	Durbin-Watson stat	1.530662

Source: EViews 10

Based on Table 5 the value of the Durbin-Watson statistic is 1.530662. Note that because the value of the Durbin-Watson statistic lies between 1 and 3, namely 1 < 1.530662 < 3, the non-autocorrelation assumption is met. In other words, there is no high autocorrelation in the residuals.

4. Heteroscedasticity Test

To test whether there is heteroscedasticity or not, the Breusch-Pagan test can be used. Table 6 presents the results of the heteroscedasticity test using the Breusch-Pagan test.

Table 6. Heteroscedasticity Test with the Breusch-Pagan

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.261526	Prob. F(2,154)	0.7702
Obs*R-squared	0.531437	Prob. Chi-Square(2)	0.7667

Source: EViews 10

Based on the results of the Breusch-Pagan test in Table 7, it is known that the Prob.line *the Obs*R-squared* 0.7667 > 0.05 which means there is no heteroscedasticity.

Table 7. Results of Panel Data Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.004256	0.001210	3.518330	0.0006
X2	-0.000148	0.000155	-0.958718	0.3392
C	0.272440	0.009803	27.79136	0.0000
Random Effects (Cross)				
_NIAS—C	-0.035528			
_MANDAILINGNATAL—C	-0.037398			
_TAPANULISELATAN—C	-0.029986			
_TAPANULITENGAH—C	0.021934			
_TAPANULIUTARA—C	0.039029			
_TOBASAMOSIR—C	0.023665			
_LABUHANBATU—C	-0.022695			
_ASAHAN—C	-0.004640			
_SIMALUNGUN—C	-0.008985			
_DAIRI—C	-0.023306			
_KARO—C	0.006310			
_DELISERDANG—C	-0.006412			
_LANGKAT—C	-0.017642			
_NIASSELATAN—C	-0.015696			
_HUMBANGHASUNDUTAN—C	0.027703			
_PAKPAKBARAT—C	-0.036016			
_SAMOSIR—C	-0.009810			
_SERDANGBERDAGAI—C	-0.005575			
_BATUBARA—C	-0.035080			
_PADANGLAWASUTARA—C	0.003741			
_LABUHANBATUSELATAN—C	-0.047264			
_LABUHANBATUUTARA—C	-0.012501			
_NIASUTARA—C	-0.035810			
_NIASBARAT—C	-0.022069			
_SIBOLGA—C	0.019665			
_TANJUNGBALAI—C	0.027927			
_PEMATANGSIANTAR—C	0.028145			
_TEBING—C	0.028054			
_MEDAN—C	0.038547			
_BINJAI—C	0.024813			
_PADANGSIDEMPUAN—C	0.055569			
_GUNUNGSITOLI—C	0.061311			

R-squared	0.074017	Mean dependent var	0.079655
Adjusted R-squared	0.061992	S.D. dependent var	0.020543

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S.E. of regression	0.019518	Sum squared resid	0.058666
F-statistic	6.154910	Durbin-Watson stat	1.804875
Prob(F-statistic)	0.002682		

Based on the results of the panel data analysis above, the panel data regression equation is obtained as follows:

$$\mathbf{Yit = 0.004256X_{1it} - 0.000148X_{2it} + e}$$

Based on the panel data analysis results:

1. Unemployment (x1) has a positive effect on inequality (y), with a coefficient value of 0.004256, and is significant, with a Prob value. 0.0006 <0.05.
2. Poverty (x2) has a negative effect on inequality (y), with a coefficient value of -0.000148, but not significant, with a Prob value. 0.3392 > 0.05.

The coefficient value for the South Labuhan Batu area is the smallest, namely -0.047264. Meanwhile, the coefficient value for the Gunung Sitoli area is the largest, namely 0.061311. This means that the highest level of inequality occurs in the Gunung Sitoli region. While the lowest level of inequality occurs in the South Labuhan Batu region.

If the coefficient is 0, it means perfect equality, while if it is 1, inequality is absolutely perfect. So we can rank the 33 provinces in North Sumatra, inequality that occurs from the lowest inequality to the highest inequality.

According to Deyshappriya (2017) and Syilviarani (2017), income inequality is significantly and positively affected by unemployment. If the unemployment rate increases, the impact will reduce the wage rate. In contrast to the findings of Nielson & Alderson (2015) which stated that the recent increase in inequality had an ambiguous effect on unemployment in the United States in 1970, 1980, and 1990. The effect of the unemployment rate was not significant in 1970, but in 1980 it was negative and highly significant, indicating that unemployment reduces income inequality, contrary to predictions. In 1990, however, the unemployment effect was no longer significant.

Apergis, Dincer, & Payne (2011) stated that in the short term unemployment has a positive and significant impact on income inequality, while poverty has a positive and significant impact on income inequality in the short and long term. Likewise, research from Hassan, Zaman, & Gul (2015) states that in the long run there is a positive relationship between poverty and income inequality

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, the conclusions of this study are: Unemployment has a positive and significant effect on income inequality in 33 districts/cities of North Sumatra province. This is because the benefits of unemployment are still not evenly distributed among all groups in society so that high unemployment is not effective in reducing income inequality. Poverty has a negative effect on income inequality in 33 districts/cities of North Sumatra province. So the magnitude of the poverty rate is one of the causes of income inequality, which if there is an increase in the percentage of poor people, the income inequality rate will increase.

Recommendations that can be given to the Provincial Government of North Sumatra, namely: Income inequality in North Sumatra Province must be followed up by the government by making good policies in the form of creating more jobs and paying attention to the level of people's welfare. Human empowerment, especially in areas that are still lagging behind in terms of economic development and should not only be concentrated in big cities, so that later it can reduce income inequality that occurs in society. And further researchers are advised to add to the variables to be studied so that later the variables under study are able to represent the factors that as a whole can affect income inequality, research areas should also be carried out for other regions where there has not been much research on income inequality so that they can provide to the government as a policy maker.

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