

# Analysis of Factors Affecting Poverty in North Sumatra Province (Period 2015-2020)

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## ABSTRACT

This study aims to determine and analyze the effect of economic growth, human development index, population growth, and unemployment rate on poverty in North Sumatra Province. The type of data used in this research is the type of quantitative data with secondary data. The object of this research is all regencies/cities in North Sumatra Province which consists of 33 regencies/cities. This study uses panel data, which combines time series and cross section data for 6 years, from 2015 to 2020. The data analysis method used in this study is the panel data regression analysis method with the Eviews10 analysis tool. The results of the research based on panel data regression analysis method show that economic growth, human development index, population growth, and unemployment rate have a simultaneous effect on poverty. Partially, economic growth has a negative and significant effect on poverty, the human development index has a negative and significant effect on poverty, population growth has a positive and significant effect on poverty, and the unemployment rate has a positive and significant effect on poverty. The policy implication in this research is that the government is expected to be more serious in creating an investment climate by developing Special Economic Zones (SEZ) and Industrial Estates (KI), improving government performance through the Family Hope Program (PKH), implementing Family Planning (KB) programs and delaying the age of birth, marriage to suppress population growth, and the

use of Pre-Employment Cards to reduce unemployment.

**Keywords:** *Economic Growth, Human Development Index, Population Growth, Unemployment Rate, Poverty*

## INTRODUCTION

Poverty is a very interesting discussion not only at the regional level but also at the national and international levels such as at the United Nations (UN) meeting in 2000 which triggered the Millennium Development Goals (MDGs). The Millennium Development Goals Declaration, agreed by the heads of state and representatives of the 189 countries of the United Nations (UN), was implemented in September 2000, in the form of eight items of benefits to be achieved by 2015. One of the first and most important discussions is related to poverty by targeting the achievement of people's welfare and community development by 2015.

The Millennium Declaration, adopted by 189 countries and signed by 147 heads of government during the Millennium Summit in New York in September 2000. The Indonesian government also attended the Millennium Summit in Fresh New York and signed the Millennium Declaration. The Declaration contains the commitment of each country and the international community to achieve the 8 MDGs

Development Goals as a package of measurable goals for the development and welfare of the people.

On September 25, 2015, the SDGs were launched at the headquarters of the United Nations (UN) to officially ratify the Agenda of Sustainable Development Goals (Sustainable Development Goals) in this moment targeted Sustainable Development until 2030. The first point in the SDGs declaration is to discuss poverty. That's how important it is to talk about poverty in the world.

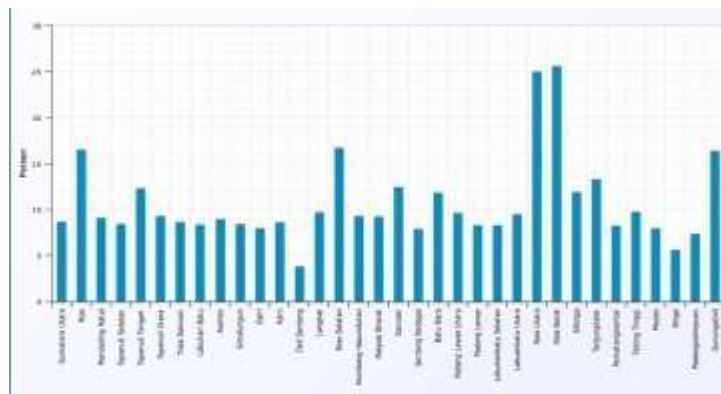
According to the World Bank (World Bank) in the World Bank Institute (2005), poverty is deprivation in welfare. Based on this definition, poverty can be viewed from several sides. From the conventional view, poverty is seen from the monetary side, that is, poverty is measured by comparing the income/consumption of individuals with certain limits, if they are below these limits, then they are considered poor.

The next view of poverty is that poverty is not only a monetary measure, but also

includes poor nutrition as measured by examining whether children's growth is stunted. In addition, it can also be from poor education, for example, by using indicators of illiteracy. Furthermore, a broader view of poverty is that poverty exists if people lack basic skills, so that income and education are inadequate or poor health, or insecurity, or low self-confidence, or a sense of helplessness, or the absence of free speech.

In the era of President Joko Widodo in 2014-2019, seven programs were running to reduce poverty, including the Smart Indonesia Program (PIP), healthy Indonesia Program (PIS), Family Hope program (PKH), prosperous Rice (Rastra) or food Social Assistance, Non-cash food assistance (BPNT), village funds, and Agrarian Reform and Social Forestry.

In the first period of President Jokowi's administration, the poverty reduction rate in Indonesia decreased quite high, and can be seen in the graph below.



**Graph 1 The Number and Percentage Of Poor People By District / City Of North Sumatra In 2020**  
Source: BPS, (processed data)

According to Amartya Sen In Bloom and Canning, (2001) that a person is said to be poor when experiencing "capability deprivation" where a person is experiencing a lack of substantive freedom. According to Bloom and Canning, this substantive freedom has two sides: opportunity and a sense of security. Opportunity requires education and security requires health. In the national and global context, Development organized by countries is

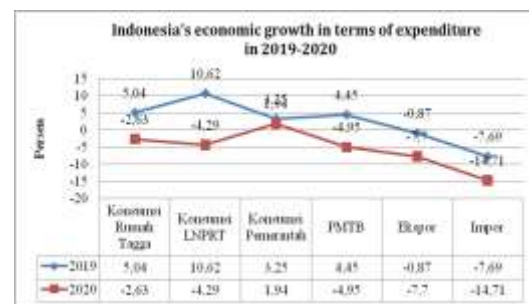
essentially to improve the welfare of their people, where people in the country/region are more advanced when there is an increase in development. The purpose of national development is to improve economic performance in order to be able to create jobs and organize a decent life for all people which in turn will realize the welfare of the Indonesian population. One indicator of development success is the increase in economic growth, with high economic

growth and able to reduce unemployment or poverty in the country/region (Rustam, 2010).

Indonesia experienced four times the decline in economic growth during the period 1992-2020. First, Indonesia experienced a second recession in 1997-1998 due to the currency crisis in Asian countries. Starting from the fall of the Thai Baht exchange rate in June 1997 which then spread to other countries, namely: Malaysia, Korea, Philippines, and Indonesia. Second, Indonesia experienced a decline in economic growth from 6.3 percent down to 4.63 percent in the period III 2008-2009. This decline in economic growth is due to the influence of the global economic crisis triggered by the subprime mortgage policy in the United States. Third, Indonesia again experienced a decline in economic growth in the period 2013-2014, due to the policy of the US Central Bank to reduce the stimulant purchases of debt securities (tapering off) and lower interest rates. This Central Bank policy is a policy taken after the United States economy began to recover from the global economic crisis of 2008-2009. However, this move affected the economy of emerging market countries due to depreciation of the exchange rate and the outflow of investment capital from emerging market countries to the United States (capital outflow). Fourth, Indonesia experienced a third recession in Q2 2020, due to the covid-19 outbreak that is rapidly spreading throughout the hemisphere to reach 219 countries. This situation prompted the World Health Organization (WHO) to declare that there had been a covid 19 pandemic on March 11, 2020.

Baldwin (2020) stated that the Covid 19 pandemic affected the economy because it caused “shock demand due to government policies in controlling the transmission of Covid 19 which limited the movement of people and goods flows. The impact of Covid 19 transmission control policies causes the household sector to experience a decrease in demand because (1) there are restrictions on the mobility of people and

goods which will reduce demand and (2) people infected with Covid 19 must experience a stage of isolation and this situation will affect work productivity which has the potential to experience a decrease in income and employment relationship decisions (layoffs). Households that experience a decrease in income and demand will affect the company both from the 4 sides of production and profit to be obtained. This condition will encourage companies to make production efficiency and reduce production costs by laying off workers or laying off. The company's decision to make this efficiency will suppress the demand side in the household sector.



**Graph 2 Indonesia's Economic Growth from The Expenditure Side Year 2019-2020**

Source: BPS, (processed data)

In the outline of State Policy (GBHN), it is explicitly stated that economic growth is one of the important parts of national development. One of the National Development Goals is to reduce the level of poverty. Poverty is one of the diseases in the economy, so it must be cured or at least reduced. Poverty is a complex and multidimensional problem. Therefore, poverty alleviation efforts must be carried out comprehensively, covering various aspects of people's lives, and implemented in an integrated manner (M. Nasir, et al 2008).

Poverty is a development problem in various fields characterized by unemployment and underdevelopment. Poor people are generally weak in business ability and have limited access to social, economic, educational and health activities, thus lagging far behind other community

groups that have better potential. Poverty requires systematic, integrated and comprehensive countermeasures and approaches to meet the burden and fulfill the basic rights of citizens through inclusive, equitable and sustainable development to achieve a dignified life poverty can hinder the achievement of democracy, unity, and justice, so poverty reduction is one of the main policies needed to strengthen the foundation of sustainable economic development (Fikri, Nurpratiwi, & Saleh, 2015).

Poverty arises because of the inequality of resource ownership patterns that cause income inequality, the poor only have limited resources with low quality, besides poverty arises because of differences in access to capital and differences in the quality of human resources, where the quality of human resources is low, the resulting productivity is also low (Kuncoro, 2000).

Indonesia is one of the developing countries whose poverty level is quite high. There are three characteristics that stand out from poverty in Indonesia. First, many households are around the national poverty line, which is equivalent to PPP (Purchasing Power Parity) of 1.55 US dollars per day, so that many residents are classified as not poor but vulnerable to poverty. Second, the poverty measure is based on income, so it does not describe the actual poverty limit. Many people who may not be classified as poor in terms of income, can be categorized as poor on the basis of lack of access to basic services and low indicators of human development. Third, given the vast and diverse regions of Indonesia, regional differences are a fundamental feature of poverty.

In 2004 the Indonesian government defined the poverty line with a monthly income (per capita) of Rp 312,328. The amount is equivalent to USD \$ 25 which thus means the standard of living is still very low. However, if you use the poverty line value used by the World Bank, which classifies the percentage of the Indonesian population

living on less than USD \$1.25/day as those living below the poverty line.

According to (BPS, 2020) the percentage of poor people in Indonesia in March 2020 was 9.78 percent, an increase of 0.56 percentage points against September 2019 and an increase of 0.37 percentage points against March 2019. The number of poor people in March 2020 amounted to 26.42 million people, an increase of 1.63 million people against September 2019 and an increase of 1.28 million people against March 2019. The percentage of poor people in urban areas in September 2019 was 6.56 percent, rising to 7.38 percent in March 2020. While the percentage of poor people in rural areas in September 2019 was 12.60 percent, rising to 12.82 percent in March 2020. Compared to September 2019, the number of poor people in urban areas in March 2020 increased by 1.3 million people (from 9.86 million people in September 2019 to 11.16 million people in March 2020. Meanwhile, rural areas increased by 333.9 thousand people (from 14.93 million people in September 2019 to 15.26 million people in March 2020).

The increase in the number of poor people in March 2020 was caused by the corona virus pandemic or a type of virus that attacks human breathing. In tackling the spread of corona virus, the government implements social distancing which causes some companies to reduce their economic activities so that people lose their livelihoods and people's income/consumption also decreases. As a result, the number of unemployed also increased. In this case, the government has worked more optimally to ensure that all budgets for poverty reduction programs carried out run in accordance with the target. Some of them are part of poverty reduction programs that need to be followed up and considered is the realization government budget such as in the field of education, public health, expansion of employment.

In this case the government's efforts in tackling poverty in Indonesia one of which is the National Medium Term Development

Plan (RPJMN) 2015-2020, where the main target is to reduce the number of poor people and the fulfillment of the basic rights of the poor gradually. Where the targets set in the RPJMN are improving income distribution with family-based social protection, community empowerment and expanding economic opportunities for low-income communities to develop in order to get a decent level of welfare. On the agenda of supporting poverty reduction and improving the welfare of the people, the government has issued Presidential Regulation No. 15 of 2010, on the acceleration of poverty reduction. One of the provinces in Indonesia is the province of North Sumatra which has been designated as a national strategic area that serves as a service area, trade and agriculture. North Sumatra province still relies on economic potential in the agri-food and plantation sectors.

From data from the Central Statistics Agency in 2020, it shows that the poverty rate in Indonesia is still above 10 percent. This means that the policies undertaken by the government in reducing poverty are still less effective.



**Graph 3 Development of The Poor Population Line in Indonesia in 2015-2020 (Percent)**  
Source: BPS, (processed data)

In graph 3 above shows that the percentage of poverty in Indonesia tends to decrease, but not significantly. In 2015 the poverty rate in Indonesia was 11.15% consisting of 8.22% of the poor in urban areas and 14.09% of the poor in rural areas. In 2017 the poverty rate was at 10.36% consisting of 7.26% of the poor in urban areas and 13.47% of the poor in rural areas. Until

2020 the total poverty percentage is at 10.54% with the proportion of urban poverty at 7.88% while the rural poverty rate contributes at 13.2%. The graph above shows that there is a development gap between the population in the village and in the city. The highest percentage of poverty is obtained from the countryside than in urban areas. In addition to depending on per capita income, the percentage of people who are below the poverty line also depends on the pattern of income distribution. The more uneven the distribution, the greater the percentage of the population whose income is below the poverty line (Sukirno, 2015).



**Graph 4 Development of The Poor Population Line in North Sumatra Province In 2015-2020 (Percent)**  
Source: BPS, (Processed Data)

In Graph 4 above, shows the poverty rate in the province of North Sumatra in a period of six years. In 2015 the poverty rate in North Sumatra province was 10.79% consisting of 10.51% poor people in urban areas and 11.06% poor people in rural areas. In 2018 the poverty rate in North Sumatra province decreased to 8.95% consisting of 8.84% poor people in urban areas and 9.05% poor people in rural areas. And in 2020 the percentage of poverty increased from 2019 where the total percentage of poverty was at 8.66% to 9.14% with the proportion of poverty in urban areas of 9.25% while the rural poverty rate accounted for 9.02%.

Based on data from the Regional Economic and Financial Studies (KEKR) of North Sumatra province in the fourth quarter of 2015 states that, partially North Sumatra entered into the top five provinces with the addition of the largest percentage of poor people in Indonesia, along with the

provinces of Riau, East Nusa Tenggara, Southeast Sulawesi, and Maluku. Nationally, North Sumatra is still ranked 17th based on the order of the largest percentage of poor people.

**Table 1 Gini Ratio and Economic Growth Rate of North Sumatra Province in 2015-2020 (Percent)**

Year	Gini Ratio	Economic Growth Rate
2015	0.326	5.10
2016	0.312	5.18
2017	0.335	5.12
2018	0.311	5.18
2019	0.315	5.22
2020	0.314	4.15

Source: BPS (processed data)

In terms of income distribution, income disparity in North Sumatra province as reflected in the GINI ratio showed inequality was at 0.305 in 2012 increased to 0.331. This is reflected in the difference in the poverty rate in the city and in the village, where the percentage of the poverty rate in the village amounted to 11.89 while in the city amounted to 11.75. The increase in rural poverty is thought to be due to the limited purchasing power of rural communities influenced by the normalization of commodity prices that is running slowly (KEKR, 2015). Then in 2017 it increased to 0.335. However, in 2018 it decreased by 0.311. While the economic growth rate tends to experience a downward trend, namely in 2011 it was 6.66%, in 2012 it was around 6.45%, and in 2020 it continued to decline, which was at 4.15%.

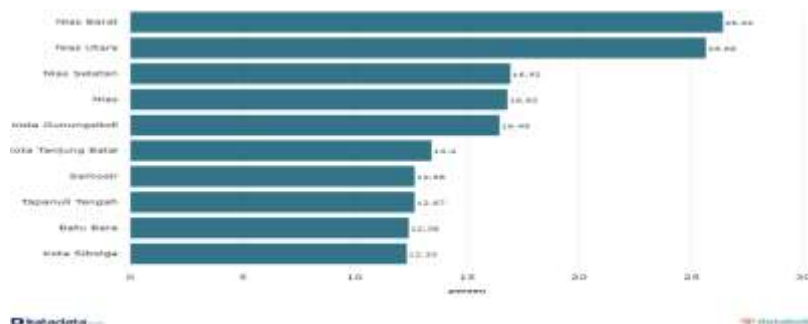
The high level of poverty in North Sumatra province makes the government pay more attention to poverty alleviation efforts. To

reduce the poverty rate, it is first necessary to know what factors affect the poverty rate, so that effective policies can be formulated to reduce poverty in North Sumatra province. Factors that allegedly affect the poverty rate in North Sumatra province include: (1) economic growth, (2) HDI, (3) population, GDP and (unemployment).

In the province of North Sumatra, poverty in the Nias Islands is highest. There are four districts in the Nias islands that are pockets of poverty in the province. Based on data from the Central Statistics Agency (BPS), West Nias is a Regency/city in North Sumatra with the highest poverty rate, reaching 26.42% of the total population. Followed by North Nias Regency with a poverty rate of 25.66%. That is, 1 in 4 residents in both districts in the living below the poverty line.

Then as many as 16.92% of the population in South Nias Regency is below the poverty line. While the percentage of poor people in Nias Regency is 16.82%. Next, the number of poor people is also in Gunungsitoli city reaching 16.45%, then Tanjung Balai city reaching 13.4%, and Samosir regency reaching 12.68%, Central Tapanuli Regency reaching 12.67%, and Batu Bara Regency and Sibolga City reaching 12.38% and 12.33%, respectively.

The covid-19 pandemic has increased the number of poor people in North Sumatra by 60.57 thousand to 1.34 million in March 2021 compared to March 2020. Therefore, the poverty rate increased to 9.01% from the previous 8.75%.



**Graph 5 Percentage of Poor Population Districts / Cities in North Sumatra**

Source: Databooks

The quality of human resources will affect the economic development of a region. The quality of human resources can be seen from the number of inhabitants. The development of population can be a factor driving and inhibiting development. Driving factor because it allows for a growing number of workers and the expansion of the market. The extent of the market for goods and services is determined by two important factors, namely Public income and

population. While the population is called a factor inhibiting development.

In relation to poverty, a large population will actually worsen the poverty level. The fact is that in most countries with a large population, the level of poverty is also greater than in countries with a small population. So it is necessary to control the rate of development of the population where if the population is not controlled it will cause problems such as crime, and poor health.

**Table 2 Number Of Poor and Total Population In North Sumatra Province In 2015-2020**

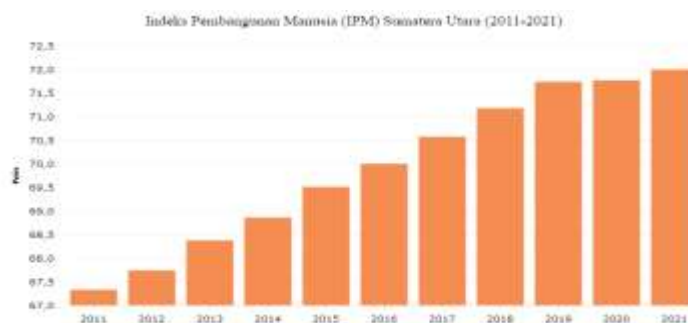
Year	Poor population (percent)	Poor population (thousand inhabitants)	Number of inhabitants (souls)
2015	10.53	1.508,14	13.937.797
2016	10.35	1.452,55	14.102.911
2017	10.22	1.326,57	14.262.147
2018	9.22	1.508,14	14.415.391
2019	8.83	1.260,50	14.562.549
2020	8.75	1.356,72	14.703.532

Source: BPS North Sumatra

One of the sources that cause the influence of the number of poor people one of them is the Human Development Index. The Human Development Index (HDI) is a breakthrough in assessing human development. The Human Development Index is one of the benchmarks for the development of a region that is negatively correlated with poverty conditions in the region. Therefore, it is expected that an area that has a high HDI value, ideally the quality of life of the community is also high or it can be said that if the HDI value is high, then the poverty rate should be low. HDI is calculated based

on data that can describe the four components, namely life expectancy which measures success in the health sector, literacy rate and the average length of schooling which measures success in education, and the ability of public purchasing power to a number of basic needs seen from the average amount of Expenditure Per Capita as an income approach that measures success in the field of development of a decent life.

To find out more details the HDI level in North Sumatra province can be seen in the graph below.



**Graph 6 Northern Province HDI Development 2011-2020**  
Source: BPS North Sumatra In Though Katadata

The Central Statistics Agency (BPS) noted that North Sumatra's Human Development Index (HDI) score reached 72 points in

2021. This figure increased 0.32% compared to the previous year's achievement of 71.77 points. From 2011 to

2021, North Sumatra's HDI score showed an upward trend with an average increase of 0.69% per year. Nevertheless, North Sumatra's HDI score is still below the National HDI average of 72.29 points in 2021.

The increase in HDI 2021 in North Sumatra is supported by the increase in all dimensions of human development in the province. The dimensions of longevity and healthy life measured by life expectancy (UHH) were recorded at 69.23 years in 2021, up 0.18% compared to 2020 which was 69.1 years. From the education dimension, the 7-year-old population's long-school expectation (HLS) increased by 0.3% to 13.27 years in 2021. Meanwhile, the average length of schooling of the population aged 25 years and over increased 0.4% to 9.58 years.

The dimension of decent living measured based on the average real expenditure per

capita per year was recorded at Rp 10.5 million in 2021. This figure is up 0.76% compared to 2020 which amounted to Rp 10.42 million. Medan city has the highest PPM score in North Sumatra, which is 81.21 points in 2021. While the lowest HDI score was occupied by West Nias at 61.99 points.

This also means that the higher the GDP, the more prosperous the population of an area. In other words, the number of poor people will decrease. GDP is a statistical data that summarizes the acquisition of added value created by the production process bank goods or services in a region at a certain period, usually a year or quarter regardless of the origin/domicile of the producer. GDP is one of the macroeconomic indicators that can be used to see the development and structure of the economy in a region.

**Table 3 GDP On the Basis of Constant Prices and Economic Growth of The Northern Province In 2015-2020**

Year	GDP (billion Rupiah)	Economic Growth (Percent)
2015	571.722,01	5,10
2016	630.766,38	5,18
2017	689.422,33	5,12
2018	747.925,63	5,18
2019	807.209,97	5,22
2020	822.035,76	4,15

Source: BPS North Sumatra

Based on Table 3 above, economic growth in North Sumatra province tends to decline from year to year, in 2011 the economic growth rate of 6.66 percent decreased to 6.45 in 2012. But in 2017 the growth rate of 5.12 percent rose to 5.18 percent in 2018 and in 2020 decreased to 4.15 percent. This is one of the impacts of the Covid-19 virus pandemic which slows the rate of economic growth.

In addition to views of, GRDP, HDI, total poverty alleviation population can be seen from unemployment. Unemployment is a macroeconomic problem that affects humans directly and is the heaviest. Most people losing a job means a decline in their standard of living and psychological well-being. Lack of human resources that can be used is the cause of unemployment. The bad effect of unemployment is that it reduces

people's income which ultimately reduces the level of prosperity that a person has achieved. The decline in people's welfare due to unemployment will certainly increase their chances of being trapped in poverty because they have no income. If unemployment in a country is very bad, political and social chaos always prevails and has a bad effect on the welfare of society and economic development prospects in the long term (Sukirno, 2004). Unemployment will have the effect of reducing people's income, and it will reduce the level of prosperity that has been achieved. The decline in the level of prosperity will lead to another problem, namely poverty. The following is presented the unemployment rate in North Sumatra province in 2011-2020 in Table 4 below.



**Table 4 North Sumatra Province Unemployment Rate Year 2015-2020**

Year	Unemployment (percent)	Unemployment (thousand inhabitants)
2015	6,71	429,00
2016	5,73	372,00
2017	5,60	377,00
2018	5,56	396,00
2019	5,41	383,00
2020	6,91	508,00

Source: BPS North Sumatra

Based on Table 4 above, it can be seen that in North Sumatra province the unemployment rate moves up and down in various years, but it can be seen that the unemployment rate tends to decrease. From the year the highest unemployment rate occurred in 2015 which amounted to 6.71% and in 2020 6.91% of the total population, and the lowest unemployment rate occurred in 2019 which amounted to 5.41%.

## LITERATURE REVIEW

### Poverty

Poverty is a state of lack of property and valuable objects suffered by a person or group of people who live in an environment of poverty or lack of capital, both in the sense of money, knowledge, social power, politics, law, as well as access to public service facilities, business opportunities and work. Furthermore, poverty means a condition in which people or groups of people do not have the ability, freedom, assets and accessibility for their needs in the future, as well as very vulnerable to the risks and pressures caused by disease and the sudden increase in the prices of food and school (Suparlan, 2000).

### Economic Growth

The definition of economic growth is often distinguished from economic development. Economic growth is related to the process of increasing the production of goods and services with the economic activities of society, while development has a broader meaning. The development process includes changes in the composition of production, changes in the pattern of use (allocation) of production resources among sectors of economic activity, changes in the pattern of distribution of wealth and income among various groups of economic actors.

However, economic growth is one of the main characteristics in the development process, this is necessary in connection with the fact that there is an increase in population. The increase in population by itself increases the need for food, clothing, housing, education, and health services.

### Human Development Index

Human development is the process of expanding people's choices. When referring to this understanding, the population becomes the ultimate goal of development, while the development effort is a means (principal mean) for that purpose. Development only emphasizes economic growth. While in human development, development should be analyzed and understood from the human side, not just in terms of economic growth. (United Nations Development Program, 1995)

### Population Growth

The quantity or number of people can be a potential or a burden for an area, it will be a potential if the number of people is balanced with other resources and has a good quality of life, it becomes a burden if the number of people exceeds the capacity of the area. High population growth causes a population explosion, this greatly affects the quality of life and the level of well-being within an area. The ability of human production will decrease if the number of population increases, and the ability of reproduction will increase if the number of population decreases or the existence of population reproduction is inversely proportional to the level of population density (Michael, 2008).

### Unemployment Rate

Unemployment is a condition in which a person who belongs to the labor force wants

to get a job but has not got it. A person who is not employed but is not actively seeking employment is not classified as unemployed. The main factor leading to the occurrence of unemployment is the lack of aggregate spending. Entrepreneurs produce goods and services with the intention of making a profit, but the profit will be obtained if the entrepreneur can sell the goods and services they produce. The

greater the demand, the greater the goods and services they embody. The increase in production will increase the use of Labor. (Sukirno, 2000). Unemployment is a population that is not working but is looking for work or is preparing a new business or a population that is not looking for work because it has been accepted but has not started working (Central Statistics Agency).

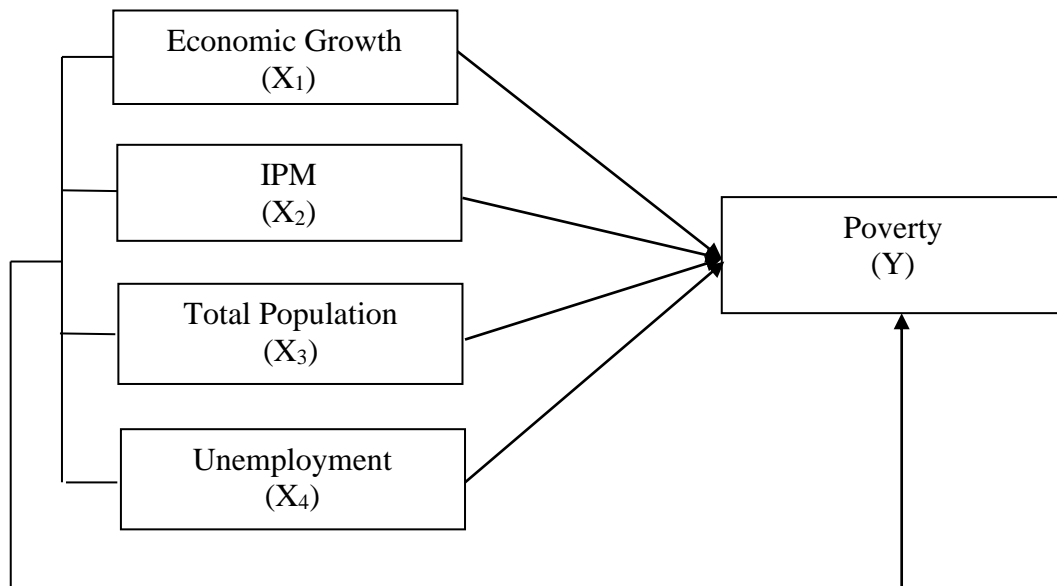


Figure 1. Conceptual Framework

### Hypothesis

Based on the background of research and the relationship between variables, the research hypothesis:

1. Economic Growth Has A Negative Effect On Poverty In North Sumatra Province.
2. Human Development Index Negatively Effect Poverty In North Sumatra Province.
3. Population Numbers Have A Positive Effect On Poverty In North Sumatra Province.
4. Unemployment Has A Positive Effect On Poverty In North Sumatra Province.
5. Economic Growth, Human Development Index, Population, And Unemployment Together Significantly Affect Poverty In North Sumatra Province.

### MATERIAL AND METHODS

This research is the field of development economics. This research is descriptive research with qualitative and quantitative approach. This descriptive study aims to describe the analysis of factors that affect poverty in North Sumatra province. Qualitative research approach to analyze the poverty conditions of North Sumatra province, while the quantitative approach to analyze the factors that affect poverty or discuss the influence of economic growth, Human Development Index, total population and unemployment against poverty. The location of the study in North Sumatra province and based on data from BPS North Sumatra. Administratively, North Sumatra Province consists of 33 regencies and cities.

The type of data used in this study is secondary data. In general, secondary data for the Social Sciences include census data,

surveys, organizational records, and data collected through quantitative as well as qualitative research (Windle, 2010). Secondary Data in this study include: a) data on the poverty condition of North Sumatra province in the form of percentage of poor population, HDI (Human Development Index), economic growth, population and percentage of unemployment and districts/cities in North Sumatra province. Data sources from BPS, journals and Media. b) time series Data for the period of 2015-2020 in the form of data on economic growth, Human Development Index, population, unemployment percentage, and percentage of poor people from 33 districts/cities in North Sumatra province, namely: Nias, Mandailing Natal, South Tapanuli, Central Tapanuli, North Tapanuli, Toba Samosir, Labuhan Batu, Asahan, Simalungun, Dairi, Karo, Deli Serdang, Langkat, South Nias, Humbang Hasundutan, Pakpak Bharat, Serdang bedagai, Batubara, Padang Lawas Utara, Padang Lawas, Labuhan Batu Selatan, Labuhan Batu Utara, North Nias, West Nias, Sibolga, Tanjung Balai, Pematang Siantar, Tebing Tinggi, Medan, Binjai, Padang Sidempuan, and Gunung Sitoli. Data source, BPS North Sumatra.

Data collection methods used in this study, obtained from the results of literature and documentation techniques. Literature study is an analysis technique to obtain information through notes, literature, and others that are still relevant, and documentation techniques are carried out by tracing and documenting data and information related to the object of study.

## **RESULTS AND DISCUSSION**

### **The Effect of Economic Growth On Poverty In North Sumatra Province**

Based on the results of the study, obtained the coefficient value of economic growth of -0.050229 with a probability value of 0.0259, meaning that economic growth has a negative and significant effect on poverty in North Sumatra province. This means that an increase in economic growth in 33

districts in the province of North Sumatra, it will lead to a decrease in poverty. The results of this study can also be interpreted that every increase in economic growth of 1%, it will also reduce poverty by 0.050229%.

North Sumatra's economic growth contracted -1.07% when compared to 2019 which grew positively by 5.22%. This contraction occurred due to a decrease in demand due to limited purchasing power and slowing exports. In addition, the decline in economic growth, among others, due to the contraction of business fields, such as transportation and warehousing by 12.77%. This contraction was also followed by the provision of accommodation and food and drink sectors by 9.26%, corporate services by 4.17%. Despite the covid attack, a number of business fields remained, namely Agriculture, Forestry, and fisheries which grew by 0.48%, then Information and communication 0.18% real estate 0.07% and financial services 0.04%.

Meanwhile, in terms of expenditure, the decline in North Sumatra's economic growth was due to the decline in the growth of almost all components. As the export component of goods and services experienced the highest contraction of 10.36%, this occurred due to a decrease in the number of foreign tourism entering North Sumatra and export demand that has not fully recovered due to limited containers. Then this contraction also occurred in the consumption expenditure component of Non-Profit institutions serving households (PK-LNPRT) of 4.02% and the household consumption expenditure component (PK-RT) of 2.98% from 4.45%, this happened because of the increase in covid-19 confirmation so that people hold back consumption and tend to be on guard amid uncertainty during the pandemic. And based on the data collected, that the highest contraction of the export component of goods and services amounted to -4.18%, followed by PK-RT component amounted to -1.52%, and PMTB amounted to -0.36%. While the source of economic growth of

North Sumatra from other components of 4.99%.

Based on economic growth data of North Sumatra province, Nias Regency is the Regency with the highest economic growth and then followed by West Nias and North Nias. While the districts / cities with the lowest economic growth is the city of Medan, Pematang Siantar and Binjai

Economic growth is a must for poverty reduction, but on the other hand quality growth must effectively reduce poverty. That is, economic growth should spread across every income group, including the poor. Therefore, growth should be ensured in sectors where the poor are employed. Economists agree that the effectiveness of economic growth in reducing poverty is strongly influenced by the initial conditions of inequality. Francois Bouruignon in his theory of the concept of growth poverty-inequality triangle, states that economic growth with a more equitable distribution of income will be more effective in reducing poverty. Therefore, by boosting economic growth without prioritizing inequality reduction, it risks being trapped into miserable economic growth and will eventually increase poverty.

The significant results of economic growth in reducing poverty are the embodiment of targeted government programs. One of them is the people's Business Credit Program (KUR). During 2018, more KUR was channeled to the trade sectors. Meanwhile, KUR for the agricultural sector is only utilized about 30% and for the micro, small and medium processing industry sector only about 40%. Therefore, to make KUR right on target, there are several alternatives that can be done. One of them is a special KUR scheme tailored to the needs of the existing sector. The special KUR scheme can also be given with a grace period that is adjusted to the production time.

Therefore, in order to achieve quality economic growth, there are several things that need to be considered, namely: first, local governments together with the private sector must have the same paradigm in

understanding that the problem of income inequality is more serious than the problem of poverty. Second, there is a serious commitment on the part of the provincial government with district and city governments to prioritize people-based development programs. That is, it must be oriented towards empowering community groups not only the 20% but also the bottom 40% in order to create jobs to accommodate unemployment. Finally, there is a proactive involvement of banks in the distribution of working capital loans for micro and small businesses (MSEs).

The results of this research and theory are in accordance with research conducted by Usman and Diramita (2018) stating that economic growth has a positive and significant effect on poverty. In contrast to the results of previous research, Pangiuk (2018) that economic growth has a negative and insignificant effect on poverty. The same research was also conducted by Prasetyo (2020) that economic growth has a negative and insignificant effect on poverty. This is because economic growth is not accompanied by an even distribution of income so that poverty will continue to increase.

### **Effect Of Human Development Index On Poverty In North Sumatra Province**

Based on the results of the study, the coefficient value of HDI is -0.944834 with a probability value of 0.0000, meaning that HDI has a negative and significant effect on poverty in North Sumatra province. The results of this study can also be interpreted that each increase in HDI as much as 1 index, it will reduce poverty by 0.944834%.

The results of this study are consistent with the new growth theory pioneered by Paul M. Romer and Robert Lucas emphasized the importance of the role of government in improving human capital development and encouraging research to increase human productivity. Further explained that the investment made in education will improve the quality of human resources. An increase in education will encourage work

productivity so that companies will provide higher salaries which will certainly improve the welfare of the community to ultimately reduce poverty.

In addition to education, health is also considered capable of reducing poverty. With a healthy society, productivity will increase. This increased productivity will increase income as well as public welfare and reduce poverty. The last indicator is purchasing power as a picture of decent living. If people's purchasing power increases as an effect of increasing income, then this will also increase public spending. The increased production of society is a reflection of the increase in the welfare of society itself. This theory is in accordance with the results of research where the increase in HDI that occurred from 2015 amounting to 69.51 increased to 71.77 in 2020 proved to reduce the number of poor people in North Sumatra province.

One of the government's efforts to improve the quality of human development is through the Family Hope Program (PKH). The Family Hope Program (PKH) aims to improve the quality of the community through access to education and Health which is expected to increase people's purchasing power. PKH is one of the government programs that open access to poor families, especially children and pregnant women to get and take advantage of various health care facilities and education available. Pkh implementation in several districts in North Sumatra province proved to reduce the number of people who are very poor.

The results of this study are in accordance with research conducted by Kotambunan et. al. (2016) that human HDI has a negative and significant influence on poverty. The same study was conducted by Mukhtar et. al. (2019) that HDI has a negative and significant effect on poverty. In contrast to previous research results, Sayifullah and Gandasari (2016) stated that HDI has a positive and significant effect on poverty. According to the researcher, a high index value in a person does not necessarily

provide a guarantee of being far from poverty. For example, when viewed from the assistance provided by the government in the field of education, it is not certain that those who have a good quality of Education will live a decent life and get the job they want. This is what causes an increase in the number of unemployed and will eventually increase the poverty rate.

### **Influence Of Population On Poverty In North Sumatra Province**

Based on the results, the coefficient value of the population is 0.064619 with a probability value of 0.0330. This means that the population has a positive and significant effect on poverty in North Sumatra province. This result can also be interpreted that every population of one hundred thousand people, it will increase poverty by 0.064619%.

These results are consistent with the theory proposed by Malthus that uncontrolled population growth will increase poverty. The increase in poverty occurred due to population growth according to the geometric progression while the growth of foodstuffs increased according to the arithmetic progression. According to Malthus, the existing resources on earth are not able to keep up with the needs of the growing human population. This ultimately resulted in human needs that are not limited precisely inversely proportional to the amount of resources that are limited. This is what will push people closer to the poverty line due to intense competition in an effort to meet needs. In addition to foodstuffs, high population growth will also cause competition in getting jobs, but on the other hand employment is limited. This will result in people who are unable to compete will lose and unemployed or working but with low incomes that will cause poverty to increase.

Based on the data, it is known that population growth in North Sumatra province decreased from 2015 to 2020. This decline is one manifestation of the success of family planning programs in Indonesia.

In practice, the use of contraceptives is one of the success factors of this program. Based on BPS data, it is known that there has been an increase in the use of contraceptives in Indonesia (CPR) in couples of childbearing age, namely 15-49 years who have married, which is 64.47% in 2015 and 64.54% in 2020. In addition to contraceptive use, the decline in population growth is also a success of the increase in the median age of first marriage of women, which is from 18 years to 21 years. The success of this program was marked by a decrease in the total birth rate among women of childbearing age, which was 2.35 in 2015 and decreased to 2.28 in 2020.

In an effort to control population growth, BKKBN also faces obstacles, such as the lack of public knowledge in choosing contraceptive methods. Although the population growth rate in North Sumatra province decreased from 2015-2020, but if the existing constraints are not addressed seriously, it is not impossible that in the future there will be an increase in population explosion. Therefore, in order to achieve population control efforts, it requires mutual support between the government and the community through population education. As explained above that decreasing population growth will decrease poverty. This is evidenced by a decrease in the number of poor people, namely 1463.66 thousand people in 2015 to 1823.29 thousand people in 2020.

On the other hand, population growth can also reduce poverty. As one of the basic capital of development, a large population, especially accompanied by good quality is a guarantee for optimal development. The large population also gives another advantage, namely the number of consumer users of various consumer goods/products. High demand for consumer goods/products is one of the factors supporting economic growth. Economic growth is quality economic growth. So to get quality economic growth, quality human resources are also needed. Increasing the capacity and quality of a nation through the development

of superior human resources is a common task in creating a strong nation and a prosperous country. Through superior, resilient and qualified human resources both physically and mentally, it will have a positive impact not only on increasing the competitiveness and independence of the nation, but also in supporting national development. In this regard, there are several things that should be a top priority in the development of human resources quality, among others, first, is a good education system and quality. To achieve this, it is necessary to organize the education system as a whole, especially with regard to the quality of education, as well as its relevance to the needs of society and the world of work. The government in this case has an important role in the implementation of an effective and efficient education system, oriented to the mastery of Science and technology and evenly distributed in all corners of the country. The second is the strengthening of the role of religion in social life in order to strengthen the identity and personality of the nation (character building). The third is human resource capacity building through various trainings, competencies, coaching and others. Professional and skilled labor according to the demands/needs of the market is a factor of excellence of a nation in the face of global competition and the last is the coaching and development of society, especially the younger generation as the main support in the wheel of development.

The results of this study are in accordance with research conducted by Azizah et. al. (2018) that population numbers have a positive and significant effect on poverty. The same research was conducted by Sukomo (2019) that there is a positive and significant relationship between population growth and poverty levels in districts and cities in West Java. In contrast to the results of previous research, Sulastri (2017) found that population growth had a negative and significant effect on poverty due to the number of people dominated by productive age. Population growth is considered

capable of spurring development to drive economic activity that will ultimately improve community welfare and reduce poverty.

### **The Effect Of Unemployment On Poverty In North Sumatra Province**

Based on the results of the study, obtained the coefficient value of the unemployment rate of 0.002150 with a probability value of 0.0136, meaning that unemployment has a positive and significant effect on poverty in North Sumatra province. This means that any increase in unemployment in 33 districts in North Sumatra province, it will increase poverty, but the effect is not so great. The results of this study can also be interpreted that every increase in the unemployment rate of 1%, it will increase poverty by 0.002150%.

These results are in accordance with the theory put forward by Sukirno that the adverse effect of unemployment is to reduce people's income, which ultimately has an impact on their welfare. Viewed from the individual side, unemployment will cause various economic and social problems. The state of low income does not even exist at all makes the unemployed have to reduce spending on their consumption. This, if allowed to continue, will have an impact on the quality of long-term economic development. A decrease in welfare in the unemployed will increase the chances of being trapped in poverty.

The insignificant result between unemployment and poverty in 33 districts in North Sumatra province shows that the unemployment rate does not dominantly affect the number of poor people. This condition is caused because in urban areas people tend to be willing to be unemployed to wait to get a job that suits their education. In addition, the large number of the labor force that refuses to work is due to the mismatch of expected salaries. This is supported by BPS data which states that when viewed according to age groups, the highest TPT is in the young population, which is at an early age to start looking for

work after completing education, which is in the age group of 20-24 years. This situation is due to the nature of people who tend to choose jobs, causing high unemployment in the age range. But on the other hand, despite being unemployed, most of the labor force like this is still covered by other family members with relatively high incomes, so the average income is still above the poverty line.

The results of this research and theory are in accordance with research conducted by Gung et. al. (2019) that open unemployment has a positive and insignificant effect on poverty. The same study was conducted by Rizal et al. al. (2020) where the unemployment rate has a positive and insignificant effect on poverty. In contrast to the results of previous studies, Yacoub (2012) states that unemployment has a negative and significant effect on poverty.

### **Policy Implications**

Poverty is referred to as a multidimensional problem, which in solving the problem must also be done with a multidimensional approach. In an effort to overcome the problem of poverty, the government is expected to be able to view the community as a subject rather than as an object and provide opportunities for the community to participate in pursuing strategies in poverty reduction.

There are several factors that are considered capable of reducing poverty, one of which is economic growth. The economic growth needed to reduce poverty is quality economic growth and fair principles. As is the case in the city of Medan that the growth that occurs is only enjoyed by some layers of the population, especially in urban areas. The decline in the manufacturing industry, which is generally located in urban areas, is a factor in the increase in inequality in Medan. To encourage the region, it can be done by creating a conducive business climate that will attract investors to invest. One of the efforts that can also be done for regional economic development and maintaining the balance of regional progress

is the development of special economic zones (SEZs). SEZ is developed through the preparation of areas that have geoeconomic and geostrategic advantages and serve to accommodate industrial activities, exports, imports, and other economic activities that have high economic value and international competitiveness. One of the conditions for SEZ development is the availability of investors who will drive investment in the region. SEZ aims to accelerate development and reduce inequalities in society through the presence of economic activities that provide added value. The formation of SEZ is expected to further build regional competitiveness by utilizing its potential to improve the welfare of the community.

In addition to SEZ, the acceleration of regional development is also supported by the construction of industrial sites in the form of industrial estates (KI). KI aims to control Spatial Planning, increase environmentally sound industrial efforts, accelerate industrial growth in the region, improve industrial competitiveness, increase investment competitiveness, and provide location certainty in coordinated infrastructure planning and development between related sectors. As it is known that the industrial area in North Sumatra province is located in Batu Bara Regency. Through IP is expected to create equitable economic development and improve the efficiency of logistics systems and IP as the main movement of new growth centers.

The second factor that is considered capable of reducing the number of poor people is the Human Development Index. This is measured by looking at the quality of education, health and decent living standards. In accordance with the 5th precept of Pancasila, namely social justice for all Indonesian people and Article 31 paragraph (1) and (2) of the 1945 Constitution, namely every citizen has the right to education and every citizen is obliged to attend basic education and the government is obliged to finance IT, education is a basic right of society that must be fulfilled with the principle of social

justice. Efforts that can be done to increase the HDI is the Family Hope Program (PKH). PKH as a conditional social assistance program is expected to provide access to poor families, especially pregnant women and children to take advantage of various health care facilities (faskes) and educational service facilities (fasdik) available. PKH benefits also began to be encouraged to cover people with disabilities and the elderly by maintaining the level of social welfare in accordance with the mandate of the Constitution and Nawacita President.

The third factor is the control of population growth. Controlling population growth can be done by promoting family planning programs (KB). Increased family planning program can be done by increasing the use of contraceptives in the province of North Sumatra, which proved able to reduce the total birth rate in women of childbearing age. In addition to the use of contraceptives, another effort that can be done is to increase the median age of first marriage of women. The increase in the median age of first marriage of women can be done by urging people to marry according to the minimum age recommended by the Family Planning Agency (BKB). If marriage at a young age can no longer be avoided, it is recommended to use contraception until the age that is ideal enough to give birth. Another thing that can be done to reduce population growth is to establish local regulations in districts that are considered economically attractive to reduce migration rates that can increase unemployment and poverty.

The last factor is unemployment. In order to reduce the unemployment rate, the government can provide assistance in the form of entrepreneurship training and facilities to small and Medium Enterprises (SMEs). This effort is expected to stimulate and encourage small and medium entrepreneurs to be able to develop businesses, master technology and market information independently. One of the tangible evidences of the government's



efforts to reduce unemployment is through pre-employment cards. The pre-employment card Program is a work competency development and entrepreneurship program in the form of cost assistance aimed at job seekers, workers who have been laid off, or workers who need competence improvement, including micro and small businesses.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **CONCLUSIONS**

Based on the results of the study it can conclude as follows:

1. Partial economic growth has a negative and significant effect on poverty in North Sumatra province. The negative influence is evidenced by data on economic growth that increased from 2015 to 2019 and is inversely proportional to the number of poor people. The district with the highest economic growth is Medan City.
2. HDI partially negative and significant effect on poverty. This is evidenced by HDI data that increased from 2015 to 2020, but inversely proportional to the number of poor people. The district with the highest HDI is Medan City.
3. Partial population has a positive and significant effect on poverty in North Sumatra province. This is evidenced by data on population growth rates that increased from 2015 to 2020, as well as the number of poor people. The district with the highest population growth is West Phakpak district.
4. Partial unemployment has a positive and significant effect on poverty in North Sumatra province. This significant result is evidenced by data on the percentage of open unemployment in North Sumatra decreased from 2015 to 2020, and is directly proportional to the number of poor people. This is due to the large number of people who tend to be willing to be unemployed to wait to get a job in accordance with their education as evidenced by the high

number of TPT at a young age. The district with the highest TPT is Pematang Siantar city.

5. Economic growth, HDI, population and unemployment have a significant effect simultaneously on poverty in North Sumatra province.

### **RECOMMENDATIONS**

The suggestions of researchers from the research that has been done are as follows:

1. For the government of North Sumatra province, the author expects to be able to reduce the number of poor people by increasing economic growth without increasing inequality. Therefore, the authors suggest that for the success of KEK and KI which is one way of economic development without increasing inequality, it takes infrastructure readiness to the rural level that is adequate so that all facilities can be integrated, as well as distribution channels run smoothly and supporting facilities for the growth of priority industries in the form of commercial areas and research and development and other supporting facilities. In addition, the APBN and APBD budgets should also be a serious concern of the government. A large budget but not implemented on time and on target will only worsen the condition of regional development.
2. In addition, the authors suggest that the government of Governors, Mayors and Regents should determine the target households or prospective recipients of the program should be updated regularly so that the distribution can be on target and the funds provided to recipients of the program should be monitored regularly so that its use can be in accordance with the objectives of the program itself. In this case also the Minister of Social Affairs (Ministry of Social Affairs) should continue to encourage PKH beneficiaries not to fall back into poverty. As well as raising the aid figure so that the aid is not only for

- survival needs but can encourage other activities that can later become the income of the people receiving the aid. One of the efforts that can be done is to increase the capital incentive stimulant assistance (BSIMU) to beneficiary families. Through this program is expected to be able to encourage micro businesses that will be able to drive the economy.
3. For the government, governors / mayors and Regents as well as relevant agencies that handle these problems the authors suggest that BKKBN in 33 districts in North Sumatra province educate the public about the benefits of family planning and how to choose the best contraceptives. As well as during the Covid-19 pandemic, education about the importance of family planning is considered very important considering the concerns of the community to access health services at midwives and doctors due to the limited equipment of health workers in preventing the transmission of the Covid-19 virus.
  4. Furthermore, the authors expect that the government through the Ministry of manpower (Kemnaker) to conduct expansion activities for employment opportunities in all sectors and also the level of Education. With this, it is expected that the labor force that tends to choose will be able to get the job they want. In addition, in order to reduce unemployment, it is also necessary to increase activities that are at work through infrastructure improvements, training for the community as well as appropriate technology. Therefore, the author also suggested that the government give priority to pre-employment cards for the workforce who are victims of layoffs, given the high unemployment rate as a result of layoffs during this pandemic.
  5. For readers, the results of this study are expected to add insight into knowledge related to factors affecting poverty in the province of North Sumatra.
  6. For the next researcher, the results of the study can be used as a reference or relevant research on poverty in North Sumatra province, and need to modify the independent variables either add variables or add time series data. To be more objective and varied in conducting research.

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