

ANALYSIS OF THE INFLUENCE OF OPEN UNEMPLOYMENT, HUMAN CAPITAL AND POPULATION ON POVERTY IN NORTH SUMATRA

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Abstract

This research aims to find out how much influence the unemployment rate, human capital and population have on poverty in the 2018-2022 period. This research uses quantitative methods with descriptive analysis. The data used in this research is secondary data sourced from the North Sumatra Central Statistics Agency (BPS) for 5 years from 2018-2022. The data analysis technique uses the Fixed Effect Model based on the results of the Chow test and Hausman test. The research results show that (1) the independent variables, namely open unemployment, human capital, and population have a significant effect on poverty in North Sumatra province, (2) the level of open unemployment has a positive and significant effect on poverty in North Sumatra, (3) the Human variable Capital has a negative and significant effect on poverty in North Sumatra, and (4) the population variable has a positive and insignificant effect on poverty in North Sumatra

Keywords: Poverty, Open Unemployment Rate, Human Capital, Population.

INTRODUCTION

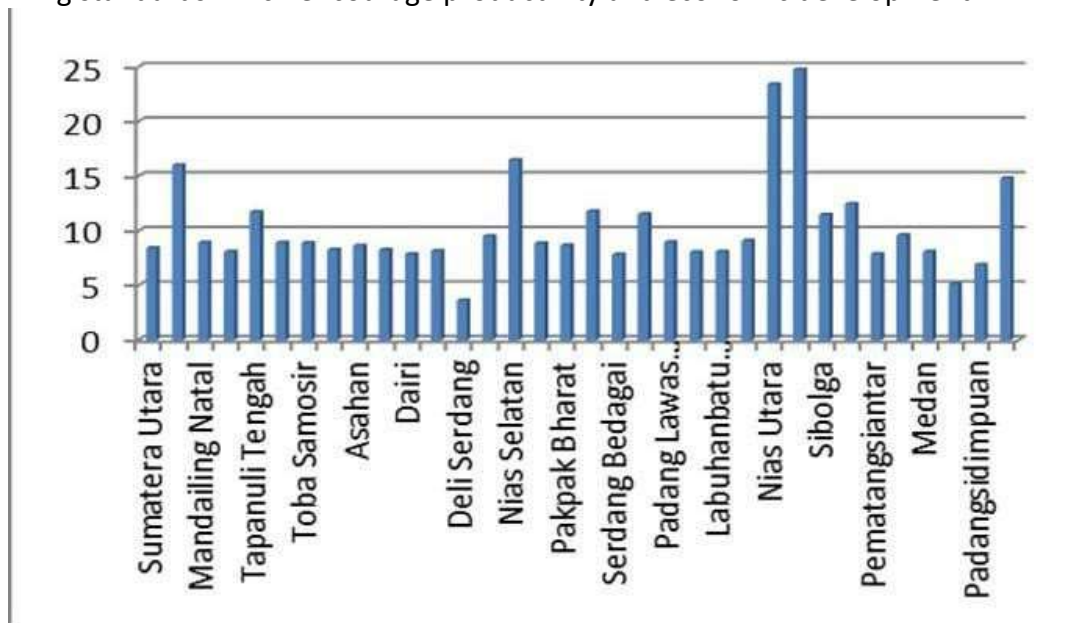
Indonesia is a development country, reflected in the grouping of countries according to their level of welfare. One of the problems facing developing countries, including Indonesia, one of which is North Sumatra Province, is unemployment. Unemployment is a very complex problem because it affects and is influenced by many factors. Interacting according to patterns Not always easy to understand. This can lead to social vulnerability, and it will probably lead to poverty. Reducing the number of poor people, which ultimately has a positive impact on development and the economy, is one of the national development suggestions. The most important social indicator and the root of development problems is poverty

(Prasetyoningrum, 2018) The problem of poverty is a problem that society always faces, whether they realize it or not. Where there are people, there is poverty, and almost every country experiences poverty, but of course each country has different solutions to overcome it. This poverty causes very different social problems.

The World Bank in its publication, World Development Report 2000/2001 Attacking Poverty, defines poverty as a situation where a decent standard of living is not achieved. Meanwhile, the United Nations (UN) in its publication, The World Situation Report 1997, described poverty as a condition related to the inability to meet basic needs. From the various explanations above, a definition of poverty can be extracted as a condition when a person's standard of living is considered lower than the poverty standard known as the poverty line. According to (Arsyad, 2010) One of the policies in reducing poverty is through increasing human resources. Achieving human resource development can be done through improving access to consumption of social services, increasing productivity and efficiency through

training poor people with skills development in the hope of being able to encourage income figures, as well as increasing access to health and basic services.

In the last 5 years, Human Capital in North Sumatra Province has continuously provided economic and social improvements to the community. This can be seen from the quality of human resources which is starting to develop, as seen in 2018. Human Capital in North Sumatra Province was 9.34% and in 2022 it will continue to increase to 9.71%. (Adekoya, 2018) shows that human capital is believed to be the basis of economic prosperity. The high level of Human Capital in North Sumatra Province shows high access to Health, Education and living standards which encourage productivity and economic development.



Graph 1 Poverty level in North Sumatra

Judging from the graph above, we know that poverty in North Sumatra in 2022 will be 8.42 percent. Where in the picture above shows that West Nias is West Nias Regency with the highest poverty rate of 24.75 percent. However, specifically poverty in Pematang Siantar is 7.88 percent and Tebing Tinggi is 9.59. And on the other hand, the lowest poverty level in Deli Serdang is 3.62 percent.

Hilmi (2022) states that the population variable has a positive and insignificant effect on poverty. There are several things that make population an obstacle to development and have a positive effect on poverty. An increase in population without being accompanied by progress in other development factors will not increase income and demand. Thus, population growth will actually reduce wage levels and this means lower production costs. Apart from that, according to Malthus, a continuous increase in population is a necessary element to support additional demand, but on the other hand, it is feared that a high increase in population will have a negative effect on economic growth, which will impact the prospects for poverty reduction and development efforts further away.

Ilham (2019) states that Human Capital has a negative and significant effect on poverty. In this case, it is a very good factor that can reduce poverty, therefore the government needs to pay more attention to the quality of human capital in order to reduce poverty levels, especially in North Sumatra.

Rizky Febrian Saragih et al (2022) the open unemployment rate partially has a positive and significant effect on the poverty level. If the open unemployment rate increases, the poverty

rate will increase further. Therefore, there is a need for government programs to help those who are unable to find work in various activities, such as training that can reduce the number of public unemployed and improve the skills of the unemployed to work in the business world. Apart from that, the government needs to provide entrepreneurship training with the aim of creating jobs for the wider community and reducing the number of unemployed.

With the various influences arising from the indicators above, it can directly influence poverty in North Sumatra Province. Therefore, to see how big the influence of open unemployment, human capital, and population size is on poverty, the author is interested in carrying out this research with the title "Analysis of Open Unemployment Levels, Human Capital, and Population Numbers on Poverty in North Sumatra"

LITERATURE REVIEW

Open Unemployment Rate

Unemployment consists of several types which can be differentiated based on working hours, namely hidden unemployment, seasonal unemployment, underemployment and open unemployment. (Furqoni, 2019). The open unemployment rate (TPT) is a figure that shows the number of open unemployed people per 100 residents in the labor force category. The open unemployment rate is closely related to the population growth rate. A high growth rate will increase the number of labor force (working age population) and then the size of this labor force can reduce the availability of employment opportunities in the labor market. If they do not work, the consequence is that they cannot fulfill their needs properly. Meanwhile, Putong (Mankiw, 2013:426-427) believes that unemployed or unemployed people are those who do not have a job and are actively looking for work. The category of unemployed people is usually those who do not have a job at their working age and working period. Working age is usually the age that is not in school but above the age of children (relatively over 6-18 years, namely the education period from elementary school to high school completion). This unemployment is created as a result of the increase in job vacancies which is lower than the increase in labor. As a result, the economy is increasing in the number of workers who are unable to find work. The effect of this situation is that in a fairly long period of time they do not do any work. So they are unemployed actually and half the time and are therefore called open unemployed. Open unemployment can also occur as a result of decreased economic activity, from technological advances that reduce the use of labor, or as a result of a decline in the development of an industry.

Human Capital

The term human capital is often used by economists to refer to education, health and other human capacities which, if improved, can increase productivity (Todaro 2000). The concept of Human Capital can be seen through someone who invests with the aim of obtaining a higher level of consumption in the future. Investment in Human Capital takes the form of investment in the fields of education and health. This can be explained if the higher a person's education or the more training they have, the higher their abilities and skills. Meanwhile, health is a field that is interrelated with education. Higher education without a healthy body will not increase productivity. Meanwhile, higher education can also influence a person's level of health awareness. Measurement of health indicators in human capital is carried out using the value of life expectancy (AHH). The AHH value is an estimated average of the number of years that a person can travel during their life (Mantra, 2000). The higher a person's life expectancy, the higher the quality of their health indicators. Apart from AHH, many methods can be used to

measure health indicators such as infant mortality and maternal mortality. This depends on the expected research objectives. Education indicators are measured by combining two components, namely the literacy rate and the average number of years of schooling. The literacy rate is the percentage of the population aged 15 years and over who can read and write Latin letters and/or other letters. Average years of schooling describes the number of years spent by people aged 15 years and over in formal education. The literacy component is considered too simple to measure the level of education because education is becoming more accessible to many people. These two components are appropriate measures in determining the quality of a person's education. The average length of schooling can clearly describe the quality of a person's education, such as elementary school graduates and doctoral graduates who will have different abilities which influence the level of productivity. So it can be seen that people who have a higher level of education, as measured by the length of time they have been in school, will have better jobs and wages than those with lower education. So getting a job offered in the modern sector is based on a person's level of education and level of education. Lifetime income is positively correlated with education level.

Total population

Population is a development asset that can be utilized optimally. However, the population can become a "burden" in development if empowerment is not accompanied by adequate population quality in the region/region concerned. According to Kuncoro, residents are all people who have been domiciled in the geographical area of the Republic of Indonesia for six months or more and/or those who have been domiciled for less than 6 months but whose aim is to stay. There are three dominant factors that influence the rate of population growth, namely birth rate, death rate, and migration rate, or population movement. According to Malthus's theory, population tends to increase according to a geometric series (geometrically), while food production (natural resources) tends to increase according to an arithmetic series (arithmetically). The result is an imbalance between the earth's resources which is unable to meet the needs of an ever-increasing population. In other words, if resource development cannot support population development, it will cause poverty. The problem of population growth is not just a matter of numbers, the population problem also concerns the interests of development and the welfare of humanity as a whole. In the context of development, views on the population are divided, some consider it an obstacle to development, others see it as a trigger for development. The reason population is seen as an obstacle to development is because the large population and high growth are considered to only increase the burden of development.

Poverty

Todaro & Smith (2011) define poverty as a condition where a person cannot fulfill their basic needs to survive. This condition occurs due to several factors, including lack of income due to not working. If someone does not work, then their productivity is zero or in the low category. This situation will cause investment, consumption and savings levels to be low. Poverty is defined as a low standard of living, namely the level of deprivation in the community concerned. Economically, poverty can also be defined as a lack of resources that can be used to improve the welfare of a group of people. Poverty describes a situation of total deprivation such as limited capital, low knowledge and skills, low productivity, low income, weak exchange rates for poor people's products and limited opportunities to participate in development. Poverty theory generally leads to two major paradigms which also influence understanding of

poverty and poverty alleviation. The two paradigms in question are Neo-Liberal and Social-Democratic. These two paradigms have very clear differences, especially in viewing poverty and in providing solutions to poverty problems. According to Djojohadikusumo 1995, pattern poverty There is four , namely, persistent poverty, cyclical poverty, seasonal poverty, and accidental poverty. Economically , poverty can be seen from level lack of resources that can be used to fulfill them living necessities as well increase well-being group of people. Politically , poverty can be seen from level access to power that has an understanding of system politics that can determine the ability of a group of people to reach and use resources. Socially, poverty can be seen from the level of lack of information and social structures that support opportunities to increase productivity.

Relationship between Open Unemployment Rate and Poverty Rate

Unemployment can affect poverty in various ways. If the household has liquidity constraints (meaning that current consumption is strongly influenced by current income) then unemployment will directly affect poverty, both measured in terms of income (income poverty rate) and poverty measured in terms of consumption (consumption poverty rate).). If the household does not face liquidity constraints (which means that current consumption is not greatly influenced by current income) then an increase in unemployment will cause an increase in poverty in the long term, but not much in the short term (Wati, et al,).

Relationship between Human Capital and Poverty Levels

According to Sukirno, the relationship between human capital and poverty can be explained in 3 types, namely, a higher level of education tends to increase an individual's chances of getting a better job and with a higher income. Well-educated individuals have greater skills and knowledge, which allows them to compete in an increasingly competitive labor market. Thus, investment in education can help reduce poverty levels by providing better economic opportunities. Then Skills, skills that are improved through training and development can also reduce poverty. Individuals who have skills relevant to job market demands have a better chance of finding stable, well-paid work. And the last one is health. Good health is an important component of human capital. Healthy individuals tend to be more productive, have fewer absences from work, and have greater opportunities to contribute to the economy. In addition, high health care costs can be a cause of poverty if there is no adequate social protection

Relationship between population size and poverty level

According to Kuncoro, population size in the economic development of a region is a fundamental problem. Because uncontrolled population growth can result in the failure to achieve economic development goals, namely people's welfare and reducing poverty. Population (rapid population growth) can lead to and encourage resource overrun, lack of savings, environmental damage, ecological destruction, which can then give rise to social problems, such as poverty, underdevelopment and hunger. This is in line with the theory put forward by David Richardo which states that increasing population growth until it doubles at some point will cause an abundance of labor. This excess labor will cause wages to fall. These wages can only be used to finance a minimum standard of living so that the economy also experiences obstacles.

RESEARCH METHODS

Type of research

In this research, the author applies quantitative and descriptive research, where this research tests the linkage or relationship between two or more variables with analytical methods presented in the form of numbers in the form of data by adding explanatory sentences and quantitative data.

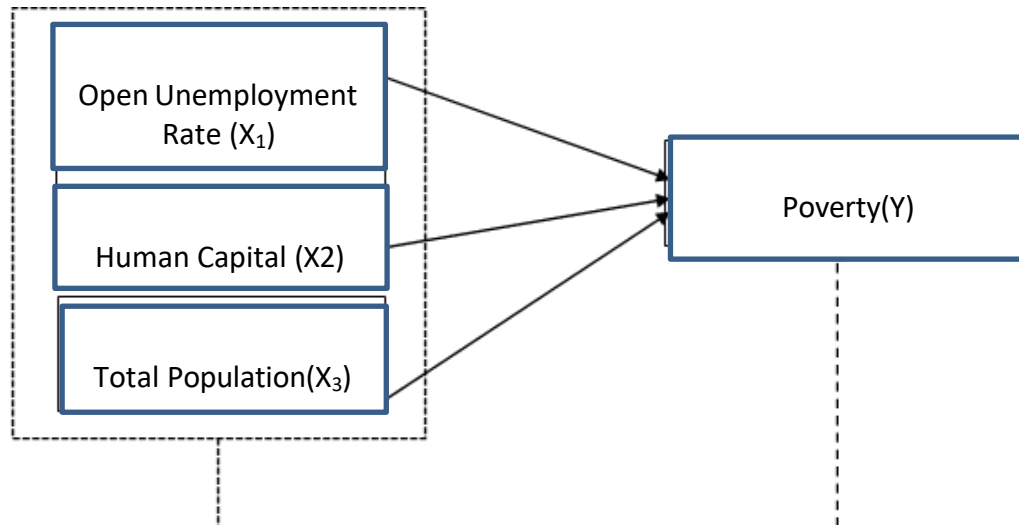
Type and source of data

In this study, the data used are secondary data from the Central Bureau of Statistics (CBS) North Sumatra. Data was collected from 33 districts/cities in North Sumatra over a period of 5 years, precisely 2018-2022. The data used in this research are:

1. North Sumatra province district/city poverty data for 2018-2022
2. Open Unemployment Data for districts/cities in North Sumatra province for 2018-2022
3. Human capital data is taken from the average length of schooling in districts/cities in North Sumatra province for 2018-2022
4. Population data for districts/cities in North Sumatra province for 2018-2022

Data Collection Techniques

In this study, the data collection techniques used are taken from documents of the Central Bureau of Statistics (CBS). The data obtained is in the form of secondary data and contains the latest data. In this research, there are 4 variables that are the focus of the research, namely poverty as dependent variable, and Open Unemployment Rate, *Human Capital* and Population as independent variables. The constellation of influences between the variables above can be described as follows:



Information : Partial Relationship : _____
 Concurrent Relationship :

Data analysis techniques

In this research, the data analysis used is data analysis using panel data regression. Panel data is a combination of cross section and time series data. This method can be used to determine the influence of one variable on another. In this research, the function model is will be used to determine and analyze poverty levels in 2018-2022 are as follows:

$$Y = \beta_0 + \beta_1OURit + \beta_2HCit + \beta_3POPULATIONit + eit$$

Ket :

Y = Poverty

OUR (X1) = Open Unemployment Rate
 HC (X2) = Human Capital
 POPULATION (X3) = Total Population
 i = Cross section
 t = Time series
 β = Coefficient
 e = error term

1. Panel Data Analysis

Panel data method is a regression model containing time series observations and cross-sectional data. In this study, the panel data estimation models that should be used are common effects model (CEM), fixed effects model (FEM) and random effects model (REM)

2. Model suitability test

In research using panel data analysis method, this study uses model testing, including Chow test and Hausman test.

3. Classic Assumption Test

Classical assumption tests used in this study are multicollinearity test, heteroscedasticity test and autocorrelation test

4. T-test (partial test)

As a test, t-test is performed to show the influence of each individual variable in explaining the dependent variable.

5. F-Test (Simultaneous Test)

F-test is performed to show whether all the entered independent variables affect the dependent variable simultaneously or together.

6. Coefficient of Determination Test

In statistical testing, the coefficient of determination is intended to measure the extent to which the regression line can explain the data used. A regression test is said to be good and perfect if the data corresponds to the regression line or if the residual value is 0. For the coefficient of determination, the value varies from 0 to 1 where $0 < R^2 < 1$, the closer the number is to 1, the better the regression test results in explaining real data and vice versa.

RESULTS AND DISCUSSION

Check the suitability of the model

Chow test

Chow test is used to determine which model is better between common effects (CEM) and fixed effects (FEM).

Cross-section fixed effects test

Effects Test	Statistics	df	Prob.
Cross-section F	240.121962	(32,129)	0.0000
Chi-square cross-section	677.113708	32	0.0000

Based on the above test results, it can be seen that the Chi square result is $0.0000 < \alpha(0.05)$, then we can conclude that the model is stationary.

Hausman test

Hausman test is used to determine which model is better between fixed effects (FEM) and random effects (REM).

Cross-section random effects test

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	11.379638	3	0.0098

Based on the above test results, it can be seen that the Chi-squared result is $0.0098 < \alpha (0.05)$, so we can conclude that the model is stationary. Therefore, we can conclude that the best model in this study is the fixed effects model (FEM).

Regression analysis of FEM model

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	20.00450	1.620983	12.34097	0.0000
OUR	0.087914	0.044484	1.976308	0.0503
HC	-1.076144	0.182858	-5.885124	0.0000
TP	4.35E-07	1.12E-06	0.389211	0.6978

Effects Specification			
Cross-section fixed (dummy variables)			
MSE Root	0.396431	R-squared	0.992747
Mean dependent var	10.86964	Adjusted R-squared	0.990780
SD dependent var	4.669172	SE of regression	0.448348
Akaike info criterion	1.423736	Sum squared resid	25.93105
Schwarz criterion	2.101397	Log likelihood	-81.45826
Hannan-Quinn criter	1.698823	F-statistic	504.5031
Durbin-Watson stat	2.030365	Prob(F-statistic)	0.000000

Based on the results of the regression testing above, it can be formulated as follows:

$$Y \text{ Poverty} = \beta_0 + \beta_1 \text{OUR} + \beta_2 \text{HC} + \beta_3 \text{TP} + e$$

$$Y \text{ Poverty} = 20.00450 + 0.0087914 \text{OUR} - 1.076144 \text{HC} + 4.35E-07 \text{TP} + e$$

From the regression equation obtained based on estimation results using the e-views 12 application, it can be interpreted that the constant has a positive and significant effect on poverty in districts/cities in North Sumatra, then the open unemployment variable has a positive and significant effect on poverty, then the *Human Capital variable* has a negative and significant effect on poverty in districts/cities in North Sumatra, and finally the population variable has a positive and insignificant effect on poverty in districts/cities in North Sumatra.

Classic Assumption Test

Multicollinearity Test

The multicollinearity test is a test used to see whether the regression model finds a correlation between independent variables. Based on Regression test results were obtained results testing multicollinearity as follows:

	OUR	HC	TP
TPT	1,000000	0.406249	0.419036
H.C	0.406249	1,000000	0.281948
TP	0.419036	0.281948	1,000000

From the output, the correlation value between independent variables is less than 0.8. So it can be concluded that there is no multicollinearity between the independent variables.

Test Heteroscedasticity

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	0.176488	0.892002	0.197856	0.8435
TPT	-0.037811	0.024479	-1.544633	0.1249
H.C	0.015755	0.100624	0.156569	0.8758
JP	3.44E-07	6.15E-07	0.558664	0.5774

Based on the output results, it shows that the value of prob. Each variable is > 0.05 , so it can be concluded that there is no heteroscedasticity problem.

Autocorrelation Test

The autocorrelation test is carried out to see whether in a linear regression model there is a correlation between confounding errors in period t and errors in period $t-1$ (previous).

Effects Specification

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MSE Root	0.396431	R-squared	0.992747
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Hannan-Quinn criter .	1.698823	F-statistic	504.5031
Durbin-Watson stat	2.030365	Prob(F-statistic)	0.000000

Based on results estimates obtained _ The Durbin-Watson stat value is 2.030365. Furthermore For see results testing using benchmarks dL and dU values . The values for $DL=1.7085$ and $DU=1.7825$. Based on the results of Durbin-Watson calculations, the position of DW is between DU and $(4-Du)$. So, in this model there is no autocorrelation. As explained below and

DU=1.7825. Based on the results of Durbin-Watson calculations, the position of DW is between DU and (4-Du). So, in this model there is no autocorrelation. As explained below:

Positive autocorrelation	cannot be concluded dU	Nothing autocorrelation	cannot be concluded 4-dU	negative autocorrelation 4-dL
1.7085	1.7825	(2.0303)	2.2175	2.7825

4. T-test (partial)

A. Open Unemployment Rate (OUR)

Based on the test results that have been carried out in the FEM Model Regression Test, the output result or calculated t of the variable Open Unemployment Rate (X1) is 1.9763 with a probability value of 0.05. The results of this test show that the output result is less than 0.05 then H1 is accepted and H0 is rejected. So it is concluded that the Open Unemployment Rate has a positive effect and has a significant influence on poverty in North Sumatra.

B. Human Capital

Based on the results of the regression testing that has been carried out, it is found that the Human Capital variable (X2) has an output result or t count of -5.885 with a probability value of 0.0000. The results of this test show that H0 is rejected and H1 is accepted. So it can be concluded that the Human Capital variable has an effect negative and has a significant influence on poverty in North Sumatra.

C. Population

in testing the population (X3) it shows that the population variable has an output or t count of 0.389 with a probability value of 0.697. The results of this test show that the output result is more than 0.05, so H0 is accepted and H1 is rejected. So it is concluded that population size has a positive effect and does not have a significant effect on poverty in North Sumatra.

5.F- Test (Simultaneous)

The F test is very necessary to see how much influence the Independent Variable (X) has on the variable (Y) together or simultaneously. The results of this test can be seen from the probability value F. Based on the results of the tests that have been carried out, it is found that in this research the probability value F is $0.0000 < \alpha(0.05)$ so it can be concluded that all independent variables (Open Unemployment Rate, Human Capital, and Population) together or simultaneously have a significant effect on poverty in North Sumatra Province.

6. Coefficient of determination and correlation

To find out the R2 determination test, you can see the value of the Adjusted R-square coefficient. This value is used so that the use of the coefficient of determination is not biased towards the number of variables. Based on results testing is known that The R-square value is 0.9927. mark the describe that three independent variables namely , Unemployment Rate Open, Human Capital and population have influence on poverty amounting to 99.27% and the remainder amounting to 0.73% is influenced by other variables not used in this research .Meanwhile for mark correlation from the obtained Adjusted R-Square is 0.9907 or by 99% this means that relationship between independent variables and variables dependent in research that can be said classified strong Because have test results that almost meet 100%.

7. Explanation/Effects between variables

A. Simultaneously

Based on results process the data that has been done done, can is known that all independent variables namely the Unemployment Rate Open, Human Capital and Population simultaneously or together influential significant impact on poverty in North Sumatra province . This is proven by the calculated F value ie of R-square of 0.9927 and value probability 0.000. that value describe that three independent variables namely , Unemployment Rate Open, Human Capital and population have influence on poverty amounting to 99.27% and the remainder amounting to 0.73% is influenced by other variables not used in this research .And based on results The constant value obtained from the regression test is amounting to 20.00450 which can be concluded that if level unemployment open, Human Capital and Population in 33 districts / cities in North Sumatra remain (constant) . poverty of 20.04%

B. Partial Influence of the Open Unemployment Rate Variable on Poverty

The Open Unemployment Rate variable has a coefficient value of 0.00879, this states that if the open unemployment rate in North Sumatra Province increases by 1%, poverty will increase by 0.008%. And based on the test results that have been carried out in the FEM Model Regression Test, the output result or calculated t of the Open Unemployment Rate (X1) variable is 1.9763 with a probability value of 0.05. The results of this test show that the output result is less than 0, 05 then H1 is accepted and H0 is rejected. So it is concluded that the open unemployment rate has a positive effect and has a significant influence on poverty in North Sumatra. This is in line with research conducted by Rizky Febrian Saragih et al (2022) the open unemployment rate partially has a positive and significant effect to poverty levels. If the open unemployment rate increases, the poverty rate will increase further. Therefore, there is a need for government programs to help those who are unable to find work in various activities, such as training that can reduce the number of public unemployed and improve the skills of the unemployed to work in the business world. Apart from that, the government needs to provide entrepreneurship training with the aim of creating jobs for the wider community and reducing the number of unemployed.

C. Partial Influence of Human Capital Variables on Poverty

The Human Capital variable has a coefficient value of -1.0761, this states that if Human Capital in North Sumatra increases by 1%, it will reduce poverty by 1.07%. And based on the results of the regression testing that has been carried out, the Human Capital variable (X2) has the output result or t count is -5.885 with a probability value of 0.0000. The results of this test show that H0 is rejected and H1 is accepted. So it can be concluded that the Human Capital variable has a negative effect and has a significant influence on poverty in North Sumatra. This is in line with research conducted by Ilham (2019) states that Human Capital has a negative and significant effect on poverty. In this case, it is a very good factor that can reduce poverty, therefore the government needs to pay more attention to the quality of human capital in order to reduce poverty levels, especially in Sumatra. North.

D. Effect of Population Variables on Poverty

The population variable has a coefficient value of $4.35E-07$, this states that if the population in North Sumatra Province increases by 1 person, poverty will increase by 4.35%. And in testing the population (X3) it shows that the population variable has an output or t count of 0.389 with a probability value of 0.697. The results of this test show that the output result is more than 0.05, so H0 is accepted and H1 is rejected. So it is concluded that population has a positive effect and does not have a significant effect on poverty in North Sumatra. This is in line with research conducted by Hilmi (2022) which states that the population variable has a positive and insignificant effect on poverty. There are several things that make population an obstacle to development and have a positive effect on poverty. An increase in population without being accompanied by progress in other development factors will not increase income and demand. Thus, population growth will actually reduce wage levels and this means lower production costs. Apart from that, according to Malthus, a continuous increase in population is a necessary element to support additional demand, but on the other hand, it is feared that a high increase in population will have a negative effect on economic growth, which will impact the prospects for poverty reduction and development efforts further away.

CONCLUSION AND SUGGESTION

Conclusion

From the results of the tests carried out, it can be concluded that open unemployment has a positive and significant effect on poverty. If the level of open unemployment increases, then the level of poverty will increase. Furthermore, the Human Capital variable has a negative and significant effect on poverty in districts/cities in North Sumatra, this is a very good factor that can reduce poverty, therefore the government needs to pay more attention to the quality of human capital in order to reduce the level of poverty, especially in North Sumatra. And finally, the population variable has a positive and insignificant effect on poverty in districts/cities in North Sumatra. There are several things that make population an obstacle to development and have a positive effect on poverty. An increase in population without being accompanied by progress in other development factors will not increase income and demand. Thus, population growth will actually reduce wage levels and this means lower production costs.

Suggestion

It is hoped that the government can take appropriate and effective policies, especially in reducing the level of open unemployment and population as well as increasing the potential of human capital in North Sumatra.

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