THE EFFECT OF ECONOMIC GROWTH, HUMAN DEVELOPMENT INDEX AND LABOR FORCE PARTICIPATION RATE ON POVERTY IN ACEH PROVINCE

Yurina *a, Maghfiratun Misla*ab
*aFakultas Ekonomi dan Bisnis, Universitas Malikussaleh*

Corresponding Author: *a yurina@unimal.ac.id
* b magfiratun.180430138@mhs.unimal.ac.id

ARTICLE INFORMATION

ABSTRACT

Keywords: Economic Growth, Human Development Index, Labor Force Participation Rate, Poverty.

The purpose of this research is to find out how much influence economic growth, human development index (IPM) and labor force participation rate (TPAK) have on poverty in Aceh province. The data used in this study were obtained from the Central Bureau of Statistics for the province of Aceh for the 2006-2020 period. The data analysis method used in this study is multiple linear regression using the Eviews 10 program. The results of this study indicate that partially the economic growth variable has a negative and significant effect on poverty in Aceh Province, while the human development index variable (IPM) has a positive effect but not significantly to poverty in Aceh Province, and the variable labor force participation rate (TPAK) has a negative and significant effect on poverty in Aceh Province. As for simultaneously the variables of economic growth, human development index (IPM) and labor force participation rate (TPAK) have a positive and significant effect on poverty in Aceh Province.

1. INTRODUCTION

Indonesia is a developing country which faces the problem of poverty which cannot be ignored, there have been many programs carried out by the government to reduce the number of poor people in Indonesia but these policies have not been able to significantly reduce the number of poor people. The Indonesian Central Statistics Agency (BPS) states that the main problem in Indonesia's population is the problem of poverty, since 2006 every three years BPS issues data on the number of poor people in Indonesia which aims to find out the development of the number of poor people in Indonesia, and aims as a guide in every policy made by the government.

The success of development is not only seen from economic growth, economic structure and income among the population but also the poverty rate an indication of the success of economic growth and development in a country or region. Poverty is a social problem that continues to exist in society.

Lewis in his book Culture of Poverty. Lewis believed that poor people could escape poverty if they changed "a culture of poverty" such as laziness, giving up easily to fate, and a lack of work ethic. But the fact is that many poor people have spent their time working hard, but are still in the mire of poverty.

Aceh is a province in Indonesia whose capital is in Banda Aceh. Aceh is one of the provinces in Indonesia which is given the status of a special region and is also given special autonomy authority. Aceh is located on the northern tip of the island of Sumatra and is the westernmost province of Indonesia. According to the results of the 2020 Central Statistics Agency (BPS) census, the population of this province is around 5,274,871 people. It is located close to the Andaman and Nicobar Islands in India and separated by the Andaman Sea. Aceh is bordered by the Bay of Bengal to the north, the Indian Ocean to the west, the Malacca Strait to the east and North Sumatra to the southeast and south. The poverty rate in this economic growth will be able to make interactions between economic actors in the economic sector which will affect the
HDI, with the HDI more or less affecting economic development in Aceh Province.

Poverty is not solely caused by the weak investment climate and cultural conditions of the people of Aceh, but because of the deadlocked access of the poor in accessing economic resources which are currently controlled by a handful of people, poverty is created and reproduced by social structures. Understanding poverty with a cultural approach is not only wrong in explaining poverty, but actually perpetuates poverty, without redistribution of economic resources (without structural reforms) poverty cannot be eradicated from its roots.

Source: Central Bureau of Statistics of Aceh Province

Figure 1.
Poverty in Aceh Province

Figure 1. Poverty in 2006-2020 illustrates a situation that fluctuates every year. The greatest poverty occurred in 2006, which was 28.28 percent and the smallest poverty occurred in 2020, which only reached 14.99 percent. Overall poverty in the last 15 years has decreased enough to be 14 percent.

Economic growth is a process of economic change that occurs within a country within a certain period of time better economy. In general, the economy is synonymous with an increase in the amount of production of goods and services caused by an increase in national income in a region or country. One of the successes of economic development is influenced by economic growth, economists believe that the best way to catch up with economic backwardness is through increasing the rate of economic growth so that it can exceed the rate of population growth. Through this effort, it will be able to increase per capita income figures so that it will automatically increase people’s prosperity.

Economic Growth is a process of developing choices for people to be free to choose a life that is prosperous, decent and valuable. If human development is successfully carried out, people can experience a healthy and knowledgeable life, and can access useful resources for a decent life. To measure services in a country in a certain period. A country's economy can be said to grow when the economic activities of its people have a direct impact on increasing the production of goods and services. This activity is also a factor in increasing national income. In essence, regional development is recommended not only to economic growth, but also to consider how poverty results from the regional development process. In accordance with Rustam’s (2010) presentation, one of the successes of economic development is influenced by economic growth. Economists believe that the best way to catch up on economic backwardness is to increase the rate of economic growth so that it can exceed the rate of population growth. Through this effort, it will be able to increase per capita income figures so that it will automatically increase people’s prosperity. The economic growth variable is taken from Aceh province GRDP data as a whole from 2006-2020.

Source: Central Bureau of Statistics of Aceh Province

Figure 2.
Economic Growth in Aceh Province

In Figure 2. It can be seen if the 2006-2020 Economic Growth describes a situation that fluctuates every year. The largest economic growth rate occurred in 2020, which was 9.74 percent and the smallest economic growth rate occurred in 2007, which only reached 5.00 percent.

The human development index shows the development of the quality of human life so that a decent life above the poverty line can be achieved. The human development index (IPM) is inseparable from the workforce or the people themselves. Labor is the capital that drives the wheel of development. Economic growth that continues to increase must still be supported by the availability of labor, both unskilled workers and skilled workers.

The Human Development Index is a process of developing choices for people to be free to choose a life that is prosperous, decent and valuable. If human development is successfully carried out, people can experience a healthy and knowledgeable life, and can access useful resources for a decent life.
poverty, BPS uses the concept (basic needs approach) of the ability to meet basic needs.

Poverty can have quite serious effects on human development because the problem of poverty is a complex problem that actually stems from the purchasing power of the people who are unable to meet basic needs so that other needs such as education and health are neglected. This makes the human development barrier between the two even bigger and in the end the achievement targets set by the government are not realized properly.

Source: Central Bureau of Statistics of Aceh Province

Figure 3. Human Development Index in Aceh Province

Based on Figure 3. It can be seen if the human development index for 2006-2020 describes a situation that fluctuates every year. The largest human development index occurred in 2020, namely 71.99 percent and the smallest human development index occurred in 2010, which only reached 67.09 percent.

The labor force participation rate, which is a measure that is often used to see fluctuations in the participation of the working-age population in economic activities, the government continues to strive to increase the Labor Force Participation Rate figure, because employment can be a source of poverty problems. If an area has a population that is not working more, it will increase the number of poor people and vice versa if the labor force participation rate increases it will provide greater impact on economic growth.

Source: Central Bureau of Statistics of Aceh Province

Figure 4. Labor Force Participation Rate in Aceh Province

Based on Figure 4. It can be seen that the labor force participation rate for 2006-2020 describes a situation that fluctuates every year. The largest labor force participation rate occurred in 2020, which was 65.10 percent and the smallest labor force participation rate occurred in 2006, which only reached 53.10 percent.

Based on this background, research on the problem of the Human Development Index will be carried out with the title "Effect of Economic Growth, Human Development Index (IPM) and Labor Force Participation Rate (TPAK) on Poverty in Aceh Province".

2. THEORETICAL REVIEW

Poverty

The Central Bureau of Statistics (BPS) defines poverty as the inability of the population to meet basic needs, the poor are residents who do not have the ability from an economic standpoint to meet basic food and non-food needs. According to KBBI (Big Indonesian Dictionary), poverty is a condition of a person who has no wealth, is deprived, or has very low income.

Etymologically, poverty comes from the word poor, which means that there is no wealth and all deprivation. Poverty appears as an individual or certain communities are considered unable to meet their basic needs which are the standard of living. When viewed from the aspect of existence, poverty is assumed to be a condition of a shortage of goods or money to ensure the survival of oneself and one's family, even poverty has been categorized as a complex social problem,
because poverty has a negative impact on the socio-economic conditions of society. (Sriyana, 2021).

According to Sharp in Kuncoro (2001) there are 3 factors that cause poverty from an economic standpoint, (1) poverty arises because of unequal patterns of resource ownership which lead to unequal distribution of income, the poor only have limited and low-quality resources. (2) poverty arises due to differences in the quality of human resources, low human resources mean low productivity and low wages, causes of low quality human resources due to low education levels, disadvantaged fate, discrimination, or heredity. (3) poverty arises because of differences in access and capital.

Meanwhile, according to Dwijowijoto (2004), poverty is a condition when a person is wealthless, has a low income, and is deficient in meeting the minimum basic needs for a decent life such as clothing, food, services, education, health, etc.

**Economic growth**

Economic growth is the development of economic activities that causes the goods and services produced by the community to increase continuously and is characterized by an increase in gross regional domestic product (GDP) in a region within a certain period. Economic growth in this study is calculated by gross regional domestic product (GDP) over constant price basis. The existence of economic growth indicates that there is success in economic development. According to Trojette (2016), economic growth is an indicator that shows the extent to which economic activity will lead to an increase in people's income in a certain period of time.

According to M.P. Todaro (2006), economic growth is the process of building an economy that is increasing from goods or product in a country, regardless of which one is more important, it is certain that economic growth is very important and needed. Because without growth there will be no increase in welfare, employment opportunities, productivity and income distribution.

According to Sukirno, economic growth means the development of activities in the economy which causes goods and services produced in society to increase and people's prosperity to increase. The problem of economic growth can also be seen as a long-term macroeconomic problem from one period to another. Meanwhile, according to Lincolin Arsyad, economic growth is defined as an increase in gross domestic product (GDP) or gross national product (GNP) regardless of whether the increase is greater or less than the rate of population growth, or whether changes in economic structure occur or not.

According to Adam Smith, economic growth is something that can develop if the population increases, the more the population increases, the more productive human resources. Meanwhile, according to David Ricardo, that the economic growth curve is not always directly proportional to the population growth curve. At one point the economic growth curve will decrease if there are too many human resources. Meanwhile, according to Karl Bucher, economic growth depends on the relationship between producers and consumers from time to time, the relationship between producers and consumers which is increasingly integrated by technology can increase economic growth.

**Human development index (IPM)**

According to BPS (2020), the human development index is a measure of development achievement based on a number of basic components of quality of life. The human development index is calculated based on data that can describe the four components, namely life expectancy which measures success in the health sector, literacy rate and average the average length of schooling which measures success in the field of education, and the purchasing power of the community towards a number of basic needs as seen from the average per capita expenditure as an approach income income that measures success in the field of development for a decent life.

According to Michael P. Todaro & Stephen C. Smith (2009) 2011: 57, the Human Development Index (IPM) is an index that measures the achievement of a country’s socio-economic development, which combines achievements in the fields of education, health, and real income per capita that are adjust. The Human Development Index appears as a criticism and at the same time an improvement to the use of per capita income figures as a measure of people's prosperity which only focuses on economic aspects.

**Labor force participation rate.**

The labor force participation rate is the proportion of the labor force to the working age population, the labor force consists of the working age population who are working and those who have not worked but are actively looking for work. While the working age population is the population aged between 16 to 64 years. A high level of labor participation means that many people are working, or at least diligently looking for work, jobs are abundant because businesses demand more workers to increase production, as a result it is relatively easy for people to find new jobs. On the other hand, when participation is low people can become discouraged because it is difficult to find work, this usually occurs during times of economic hardship, such as an economic recession.
The labor force participation rate is useful for projecting the labor force, an indicator of labor supply in an economy, a higher participation rate means more labor supply in the economy. With a greater supply of labor, the economy can produce more output, economists use labor force data to calculate potential GDP. Besides using the production function, another approach to calculating it is to sum the productivity growth rate. The labor force participation rate is defined as the ratio between the labor force and the total working age population. TPAK measures the size of labor force participation in the world of work. TPAK can be used as an indicator of the difficulty level of the workforce in getting a job.

3. RESEARCH METHOD
Location and Research Object

The research object is the nature of the object applied by the researcher to be studied and then conclusions are obtained (Sugiyono, 2016) the research object used in this study is poverty as the dependent variable, while economic growth, human development index and labor force participation rate are independent variables. The location of this research was conducted in Aceh province in 2006-2020.

Types and Sources of Research Data

The type of data source used in this study is quantitative data, quantitative data is data in the form of numbers or numbers. Quantitative data in this study are economic growth, human development index and labor force participation rate. The data used is secondary data with the type of time series data, this research is in the form of annual data for 15 years (2006-2020). The data source obtained for this research was obtained from the Central Statistics Agency (BPS) Aceh province.

Operational definition

The research variable is anything in any form determined by the researcher to be studied so that information is obtained about it and then a conclusion is drawn (Sugiyono, 2007). In this study, the research variables are as follows:
1. Poverty (Y)
   Poverty is a condition when a person or group is unable to fulfill their basic needs such as food, clothing, shelter, education and proper health. The poverty variable data is taken from data on the number of poor people in Aceh province in 2006-2020 in percent units.
2. Economic Growth (X1)
   Economic growth is a process of economic change that occurs in a country within a certain period of time to lead to a better economy. Generally, the economy is synonymous with an increase in the amount of production of goods and services caused by increase in national income in a region or country. The economic growth variable is taken from Aceh province GRDP data as a whole from 2006-2020 in percent units.
3. Human Development Index (X2)
   The human development index (IPM) is an important indicator to measure success in efforts to build the quality of human life (community/population). The human development index variable is taken from HDI data in Aceh province from 2006-2020 in percent units.
4. Labor Force Participation Rate (X3) The labor force participation rate is defined as the ratio between the labor force and the total working age population. TPAK measures the size of the labor force participation in the world of work. The labor force participation rate variable is taken from BPS data in Aceh province from 2006-2020 in percent units.

Data collection technique

Literature study is a data collection technique by collecting information from journal books, internet articles, and various other literature that is relevant to the problem under study. Literature study in this research uses scientific journals and books.

Data analysis method

Multiple Regression Analysis (Multiple Regression)

The model used in testing this hypothesis is the Multiple Regression model to examine the effect of economic growth, the human development index, and the labor force participation rate. In this study the multiple linear regression model is formulated as follows:

\[ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e \]

Information:
Y = Poverty
X1 = Economic Growth
X2 = Human Development Index
X3 = Labor Force Participation Rate
\( \alpha = \) Constant
\( \beta_1, \beta_2, \beta_3 = \) Regression Coefficient
e = Standard Error

CLASSIC ASSUMPTION TEST

Heteroscedasticity Test

The aim is to test whether in a regression model there is an inequality of variance from the residuals from one observation to another. If the residual variance from one observation to another observation remains, then it is called heteroscedasticity. To detect whether there is heteroscedasticity or not, a graph test is performed by analyzing the normal plot graph between the predicted
values of the independent variables and their residuals. Detection of the presence or absence of heteroscedasticity can be done by looking at whether there is a certain pattern on the scatter plot graph between the predicted values of the independent variables and their residuals Agung (2021).

**Autocorrelation Test**

The autocorrelation test aims to test in a model whether or not there is a correlation between confounding errors in period t and errors in period t-1 (Ghozali, 2012). According to (Gujarati, 2012) if the Obs*R Square value < X2 (Chi-Square), then there is no autocorrelation. Furthermore, the results of the Autocorrelation Test can also be seen by comparing the Chi-Squared Probability and a significant value of 5% if the Chi-Squared Prob value is > 5% then there is autocorrelation.

**Multicollinearity Test**

According to (Gujarati, 2003) Multicollinearity is the existence of a perfect linear relationship between some or all of the independent variables in the regression model. Multicollinearity test is useful for testing whether the regression model found a correlation between the independent variables. The way to find out whether there are deviations from the Multicollinearity test is to look at the Tolerance and VIF of each independent variable. Variance Inflation Factor (VIF) is one way to detect multicollinearity (Montgomery et al., 2006). This is obtained based on the fact that the increase in variance depends on the VIF itself. So if the Tolerance value is > 0.10 and the VIF value is < 10, then the data is free from multicollinearity symptoms.

**Normality test**

According to Ghozali (2005) said the normality test is to test whether in the regression model, the confounding or residual variables have a normal distribution or not. As is well known, the t test and F test assume that the residual values follow a normal distribution. If this assumption is violated, the statistical test becomes invalid for a small number of samples. This study uses the Jarque-Bera (J-B) test to determine whether the regression model is normal or abnormal, confounding or residual variables, by comparing the calculated J-B value with the value of C2 (Chi-Square) table. If the J-B value > table C2 value, then the residual value is not normally distributed and if the calculated J-B value < table C2 value, then the residual value is normally distributed. This test was carried out with the eviews 9 program by comparing the probability value (P-Value) and the significant level if the significant probability is 0.05 then the residual values are normally distributed and vice versa.

**4. RESEARCH RESULTS AND DISCUSSION**

**Research Results and Discussion**

The model used in this study is the Multiple Regression model to examine the effect of economic growth, the human development index and the labor force participation rate on poverty in Aceh province, while the stages in this test are the Normality Test, the Classical Assumption Test which consists of Autocorrelation Test, Heteroscedasticity Test, Multicollinearity Test, Multiple Linear Regression Test followed by Hypothesis testing and Correlation Coefficient and Determination testing.

**Normality test**

Based on the results of Table 5. Based on Figure 4.4 above, it can be seen that the probability value is 0.438408 > compared to the alpha level of 0.05, so it can be concluded that the data used in this study are normally distributed.

**Autocorrelation Test**

Based on Table 1. It is known that the Prob.Chi-Square value is 0.2469 > compared to the alpha value of 0.05, this indicates that there is no autocorrelation in this test.
### Heteroscedasticity Test

**Table 2. Heteroscedasticity Test Results**

<table>
<thead>
<tr>
<th>Heteroscedasticity Test: White</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>1.273156</td>
</tr>
<tr>
<td>Obs*R-squared</td>
<td>8.401244</td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>6.895881</td>
</tr>
</tbody>
</table>

Source: Processed data, (2022)

Based on Table 2. It is known that the Prob.Chi-Square value is 0.4398 > compared to an alpha value of 0.05, this indicates that this model is free from indications of heteroscedasticity or free from heteroscedasticity.

### Multicollinearity Test

**Table 3. Multicollinearity Test Results**

<table>
<thead>
<tr>
<th>Variance Inflation Factors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 11/12/22 Time: 16:26</td>
<td></td>
</tr>
<tr>
<td>Sample: 2006-2020</td>
<td></td>
</tr>
<tr>
<td>Included observations: 15</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Uncentered VIF</th>
<th>Centered VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.40E+10</td>
<td>824384.6</td>
<td>NA</td>
</tr>
<tr>
<td>PERTUMBUHAN_EKONOMI</td>
<td>13.07484</td>
<td>42.93542</td>
<td>1.826148</td>
</tr>
<tr>
<td>INDEKS PEMBANGUNAN_MANUS</td>
<td>0.000207</td>
<td>6308.484</td>
<td>1.398003</td>
</tr>
<tr>
<td>TINGKAT_PARTISIPASI_ANGK</td>
<td>0.028804</td>
<td>844810.4</td>
<td>1.600894</td>
</tr>
</tbody>
</table>

Source: Processed data, (2022)

Based on Table 3. It can be seen that the data in this study are free from indications of multicollinearity, because the Centered VIF value of each variable is below 10, which means that there is no multicollinearity in the regression model.

### Multiple Linear Regression

**Table 3. Fixed Effect Model Test Results**

\[
K = 11.43731 - 628.3343 \, PE + 0.000463 \, IPM - 0.561748 \, TPAK
\]

1. A constant of 11.43731 indicates that if the variables of economic growth, human development index and labor force participation rate are zero, then the dependent variable, namely poverty, has a value of 11.4 percent.

2. The variable coefficient of economic growth has a value of -628.3343. This shows a negative relationship. This means that if the relationship between economic growth increases by 1 percent, the number of poor people will decrease by 62.8 percent, assuming the human development index and labor force participation rate are constant.

3. The coefficient of the human development index variable has a value of 0.000463. This shows a positive relationship. This means that if the human development index increases by 1 percent, the number of poor people will increase by 0.004 percent assuming economic growth and a constant labor force participation rate.

4. The variable coefficient of the labor force participation rate has a value of -0.561748. This shows a negative relationship. This means that if the labor force participation rate increases by 1 percent, the number of poor people will decrease by 0.56 percent assuming the human development index and economic growth are constant.
DISCUSSION

The Effect of Economic Growth on Poverty in Aceh Province

The results of this test indicate that economic growth has a negative and significant effect on poverty in Aceh Province. This is proven by statistical tests with a $T_{titung} > T_{table}$ value (-5.495061 > 1.796) and a significance value of $p = 0.0002 < 0.05$, this means that increased economic growth will lead to a decrease in the percentage of poverty in Aceh Province. Economic growth is a condition a necessity to reduce poverty, while the adequacy requirement is that growth is effective in reducing poverty. The results of this study are in line with research conducted by (Yosmaliza, 2020) which shows that the variable economic growth is negative.

The Effect of the Human Development Index on Poverty in Aceh Province

The results of this test indicate that the human development index has a positive and insignificant effect on poverty in Aceh Province. This is proven by statistical tests with a $T_{count} > T_{table}$ (0.032160 > 1.796) and a significance value of $p = 0.9749 < 0.05$. The human development index is a mandatory requirement for reducing poverty, while the adequacy requirement is that the human development index is effective in reducing poverty, meaning that the HDI should spread across all income groups including the poverty class in Aceh Province. The results of this study are in line with research conducted by (Meriyanti, et al, 2011-2014) which shows that the human development index variable has a positive effect.

The Effect of Labor Force Participation Rate on Poverty in Aceh Province

The results of this test indicate that the labor force participation rate has a negative and significant effect on poverty in Aceh Province. This is evidenced by statistical tests with a $T_{tcount} > T_{table}$ (-3.356830 > 1.796) and a significance value of $p = 0.0064 < 0.05$, this means that the level of labor force participation will lead to a decrease in the percentage of poverty in Aceh Province. The results of this study are in line with research conducted by (Nugraha, 2014-2019) which shows that the labor force participation rate variable has a negative effect.

The Effect of Economic Growth, Human Development Index, and Labor Force Participation Rate on Poverty in Aceh Province

Based on the results of tests that have been carried out simultaneously, it shows that economic growth, the human development index, and the labor force participation rate have a significant effect on poverty in Aceh province. Therefore the government should pay attention to these three variables together and carry out periodic evaluations so that all three can be continuously improved in a better direction.

CONCLUSIONS AND SUGGESTIONS

Conclusion

Based on the results of research conducted using multiple linear regression methods, the following conclusions can be drawn:

1. Economic growth partially has a negative and significant effect on poverty in Aceh Province.
2. The human development index (IPM) partially has a positive and insignificant effect on poverty in Aceh Province.
3. The labor force participation rate (TPAK) partially has a negative and significant effect on poverty in Aceh Province.
4. Economic Growth, Human Development Index and Labor Force Participation Rate simultaneously have a positive and significant effect on poverty in Aceh Province.

Suggestion

Based on the discussion and conclusions obtained from the results of this study, the authors' suggestions are as follows:

1. In order to take advantage of economic growth and overcome the problem of poverty, the Aceh Provincial government needs to improve community facilities, expand employment opportunities for new workforce and also improve the quality of community resources with training programs, quality education so that the new workforce can compete and according to the category what the labor market needs. The Aceh Provincial Government can also develop a households industry and SMEs so that the number of poor people can be minimized.
2. The Aceh provincial government should equalize economic development by involving and involving all citizens, not only those who are talented, rich, intelligent, healthy, capable and better or have high positions, but those who are less fortunate also have the right to enjoy the benefits of development so that poverty rate in Aceh Province can be minimized.
3. For future researchers, it is hoped that this research can be developed by adding different variables, using more and the latest data.
BIBLIOGRAPHY


