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# The Effect of Average School Age, Per Capita GDP and Unemployment on Absolute Poverty in Meranti Island Regency

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**ABSTRACT**

This study aims to analyze the effect of average years of schooling, per capita GRDP, and unemployment on absolute poverty in the Meranti Regency Islands, both simultaneously and partially. The study is motivated by the relatively high poverty rate and fluctuating socio-economic conditions in the region. This research employs a quantitative approach using multiple linear regression analysis with the assistance of EViews software. The data used are secondary time series data from 2010–2024 obtained from the Central Statistics Agency (BPS). The analysis includes classical assumption tests (normality, multicollinearity, autocorrelation, and heteroscedasticity) and statistical tests such as t-test, F-test, and coefficient of determination ($R^2$). The results indicate that, simultaneously, average years of schooling, per capita GRDP, and unemployment have a significant effect on absolute poverty in the Meranti Regency Islands. Partially, average years of schooling and per capita GRDP have a negative and significant effect on poverty, implying that improvements in education and income levels can reduce poverty. Meanwhile, unemployment has a positive and significant effect on poverty, indicating that higher unemployment increases poverty levels. These variables collectively explain a substantial proportion of the variation in poverty within the model.

Keywords: Poverty, AYS, GRDP per Capita, Unemployment.

## I. Introduction

According to Ozughalu (2016), the main challenge in a country's economic development is the high number of poor people and community groups that are vulnerable to poverty. This problem not only hinders economic growth, but also widens social disparities and worsens people's quality of life. Therefore, various policy instruments have been designed to tackle poverty, which is even a top priority on the global agenda. This is reflected in the Sustainable Development Goals (SDG's), where poverty alleviation is placed as the first of seventeen key goals targeted to be achieved by 2030. This determination shows that poverty is a crucial issue that requires serious, systematic, and sustainable handling by all countries. Governments, international institutions, and civil society must work together synergistically in formulating and implementing programs that can improve the welfare of the poor, expand access to education, health services, and economic opportunities, so that inclusive and equitable development can be achieved (Purnomo et al., 2020).

Poverty is a complex problem that is influenced by various interrelated factors, including people's income levels, unemployment, health, education, access to goods and services, location, geography, gender, and environmental location. Poverty occurs because the ability of economic actors is not the same, so there are people who cannot participate in the development process or enjoy the results of development (Panggabean, 2019). The high poverty line in Meranti indicates a relatively large burden on household expenditure, in line with the limited access of the archipelago to the distribution of goods and services. A significant increase in the poverty line also indicates that although the threshold for spending to be categorized as poor is increasing, this does not necessarily mean an overall improvement in welfare. On the contrary, it can be a signal that the cost of living in the Meranti Islands is getting higher from year to year. This

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data is also important as an indicator for local governments to design more effective social and economic policies in reducing the number of poor people, especially by paying attention to sectors that affect the increase in the poverty line such as food prices, access to health services, and education.

One of the factors that causes poverty is education. Education has an impact on poverty alleviation, because one of the causes of poverty is low education levels. Education is the most effective effort to improve the quality of human resources. Good socio-economic, health, and nutritional quality will not be able to survive without people who have quality education. (Sayrullah, 2014). Education enables us to improve the quality of talents in achieving sustainable economic development. The education sector plays a very important role in supporting other economic processes and activities. In this context, education is seen as a means to achieve sustainable goals. Education can be used to achieve development activities and have the potential to improve the quality of life in the future (Hermawan and Bahjatulloh, 2022). Todaro (2000) revealed that human capital can be measured through the fields of education and health. Education and training can be a human being's added value. This can be explained if the higher a person's education or the more training they have, the higher their abilities and skills will be (Nurkholis, 2018).

The measurement of education indicators is carried out by combining two components, namely literacy and average length of school. Literacy is the percentage of the population aged 15 years and older who can read and write Latin and or other letters. The average length of school describes the number of years spent by the population aged 15 years and above in undergoing formal education. The literacy component is considered too simple to measure education level because education is increasingly accessible to many people. These two components are the right measure in determining the quality of a person's education. The average length of school can clearly describe a person's educational quality, such as elementary school graduates with doctoral graduates will have differences in abilities that affect the level of productivity (Nurkholis, 2018). Based on the table of average school years (years) by district/city in Riau Province in 2015-2024, the Meranti Islands show a consistent increasing trend over the past decade. In 2015, the average length of school in the Meranti Islands was recorded at 7.45 years. This figure continues to increase every year, to 7.46 years in 2016, 7.47 years in 2017, 7.48 years in 2018, and 7.51 years in 2019. This increase continued in the following years, with a long average

Schools reached 7.7 years in 2020, 7.84 years in 2021, 7.88 years in 2022, 7.99 years in 2023, and reached 8.12 years in 2024. This figure shows that although there is an increasing trend, this figure is still far below the average length of other district/city schools. The increase in the average length of school in the Meranti Islands reflects progress in access to and participation in education in the region. Although the average length of school in the Meranti Islands is still below the average of Riau province which reaches 9.43 years in 2024, this positive trend shows continuous efforts to improve the quality of education and equal distribution of learning opportunities for people in the Meranti Islands. Another factor that affects poverty is the Gross Regional Domestic Product (GDP) per capita. GDP per capita is the value of the GDP of an area divided by the number of its population. It provides an overview of the average value-added/income generated per person within the region. In other words, GDP per capita is an economic indicator that measures the average income per person in a region. According to Untoro (2010), per capita income is the average income of the population of a country. Per capita income shows the level of income of the people in a country. The variables used to calculate per capita income are gross national product and population (Takasaping, 2023).

According to Thamrin (2018), indicators to determine the level of community welfare can be seen from the GDP per capita figure. This number is often used as an indicator of development. If the GDP per capita of a region is higher, the greater the potential source of revenue for the region, this is in line with the larger community income. So that if the GDP per capita is higher, the population will be more prosperous, meaning that the number of poor people will decrease (Sari, 2022). However, the effect of GDP per capita on poverty is not always linear or automatic. In some cases, the increase in GDP per capita may not have a significant impact on poverty reduction if economic growth occurs unevenly or is only enjoyed by certain groups of people. Inequality in income distribution and limited access for poor groups to economic resources can hinder the effectiveness of GDP in reducing poverty. Based on the data in the table on Gross Regional Domestic Product (GDP) per capita based on constant prices (ADHK 2010) in Riau Province in 2015-2024, Meranti Islands Regency shows a consistent trend of increase from year to year. In 2015, the GDP per capita in this area was recorded at Rp. 59,974,000. This figure continues to increase until it reaches Rp. 68,015,000 in 2024. This increase shows a gradual economic development although in a relatively smaller amount than other regions in Riau Province.

When compared to other districts/cities in Riau, the per capita GDP of the Meranti Islands is still relatively low. This shows that the economic contribution of this region to the total GDP of Riau Province is

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still small and is likely influenced by the local economic structure that is not as strong as other regions such as Siak or Bengkalis which have much higher GDP per capita figures. This low GDP per capita reflects that the average income of the people of the Meranti Islands is also likely to be smaller, so their purchasing power and economic welfare are more limited. Thus, despite economic growth, the real level of welfare of the population may not have experienced a significant increase. This is an indicator that increasing GDP needs to be accompanied by equal distribution of economic access, job opportunities, and increased local productivity in order to truly have an impact on increasing the real income of the community at large.

The main goal of economic development is to create growth and develop the quality of human resources. Various problems arise in Indonesia, one of which is unemployment. Unemployment can be caused by rapid population growth. Based on a report by the Central Statistics Agency (BPS) in 2022, Indonesia is one of the countries with the largest population, which is 275,773.8 million people (Nurahmi et al., 2024). Astuti (2014), explained that unemployment is a problem that often occurs in countries in the world. This is due to the gap that occurs between the number of working-age population classified as the labor force and the availability of job opportunities (Nurahmi et al., 2024). Poverty is closely tied to unemployment. Unemployment is a situation in which a person who belongs to the labor force, wants to get a job but has not been able to get it. A person who does not work, but does not actively look for work is not classified as unemployed (Supit et al., 2023). Unemployment is an unavoidable condition in both developing and developed countries. Unemployment is associated with various economic and social problems that can ultimately lead to a loss of income and reduced social interest, so there are several things to consider in unemployment. The deterioration of welfare due to unemployment can lead to poverty. This is related to the view that there is a very close link between unemployment, poverty levels and income distribution inequality. High unemployment has the potential to reduce the potential for productivity increases in the region and socially reflects a greater burden on the community. As a result, people are slowly being pressured to become poor (Hermawan and Bahjatulloh, 2022). According to Karl Marx, economic growth in the early stages of development will cause an increase in the wage level of labor and then affect the increase in the risk of capital to the labor force so that there is a decrease in labor demand. As a result, it will cause an increasing unemployment problem (Zulkifli, 2016).

Knowing the influence of each variable on the number of poor people can help in formulating more targeted policies. The findings of this study are expected to be the basis for local governments to implement effective policies in reducing poverty, improving the education system, increasing residents' income and increasing household consumption. Studies have been very rare that have addressed variables related to the number of poor people together. And most of those studies have a more general focus or are conducted at the national and provincial scales. Until now, there have not been many studies that have specifically analyzed the influence of these three variables on absolute poverty in Meranti Islands Regency. The following is data on the number of unemployed by district/city in Riau province. Although the number of unemployed is not very high when compared to other areas in Riau Province, this fluctuation reflects the dynamics of socio-economic conditions in the area, which can be caused by factors such as limited employment, changes in local economic sectors, or the employment policy of Meranti Islands Regency. In addition to knowing the influence of each variable, this study also combined the three variables simultaneously. This combination allows for a more comprehensive analysis of how the three factors interact with each other and affect absolute poverty. However, from the many studies that have been conducted, there are many disparities ranging from the research period, methods, and research objects that produce diverse research results. Therefore, the author is interested in taking the title of the research "The Influence of Average School Age, GDP Per Capita and Unemployment on Absolute Poverty in Meranti Islands Regency".

## II. Literature Review and Hypothesis Development

### 2.1. Concepts and Determinants of Poverty

Poverty is a multidimensional condition that is not only related to low income but also reflects the inability of individuals to meet basic needs such as food, clothing, and shelter. The approach used by the Central Statistics Agency (BPS) emphasizes the concept of meeting basic needs (basic needs approach), where poverty is measured based on the ability to spend to meet food and non-food needs. In addition, poverty is also influenced by various structural factors such as low quality of human resources, limited access to productive assets, and inequality in income distribution. From a theoretical perspective, the concept of the vicious circle of poverty put forward by Ragnar Nurkse explains that poverty is a circle that reinforces each

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other, starting from low productivity which leads to low income, savings, and investment, so that this condition continues to recur. Thus, poverty is not only caused by economic factors, but also by social, educational, and institutional factors that are interrelated.

### 2.2. Average School Length and Per Capita GDP on Poverty

Average length of schooling and Gross Regional Domestic Product (GDP) per capita are two important indicators that reflect the quality of human resources and the level of economic well-being of the community. The average length of schooling indicates the level of education that the population has achieved, which in theory human capital is seen as an investment to increase individual productivity and income. The higher a person's level of education, the greater the chance of obtaining a decent job and a higher income, thus contributing to a reduction in poverty rates. On the other hand, GDP per capita describes the average income of the people in a region. The increase in GDP per capita shows that there is economic growth that has the potential to improve people's welfare. Based on classical and neoclassical economic growth theories, economic growth followed by an equitable distribution of income can reduce poverty rates. Therefore, both the increase in education and economic growth have a negative relationship with poverty, which means that the higher the value of these two indicators, the poverty rate tends to decrease.

### 2.3. Unemployment and Its Implications for Poverty

Unemployment is one of the main factors that affect the poverty rate in a region. In general, unemployment occurs due to an imbalance between the number of workers and the availability of jobs. In the perspective of Keynes' theory, unemployment is caused by low aggregate demand resulting in a decrease in production and labor absorption. The high unemployment rate has a direct impact on the decline in people's income, so that the ability of individuals to meet basic needs is limited. This has led to an increase in the number of poor people. In addition, unemployment also has an impact on other social and economic aspects, such as increasing income inequality, declining people's purchasing power, and hindering economic growth. Therefore, the relationship between unemployment and poverty is positive, where an increase in the unemployment rate will be followed by an increase in the poverty rate. Efforts to reduce unemployment through job creation and improving the quality of the workforce are important strategies in reducing poverty in a sustainable manner.

## III. Research Method

This study uses a quantitative approach with a secondary data type in the form of a time series covering the period of 2010–2024 in Meranti Islands Regency. Data was obtained through documentation techniques from official publications of the Central Statistics Agency (BPS) of Riau Province and Meranti Islands Regency, and supported by literature sources such as scientific journals and other relevant documents. The variables analyzed included absolute poverty as a dependent variable, as well as average length of schooling (RLS), Gross Regional Domestic Product (GDP) per capita, and unemployment as independent variables. Data analysis was performed using a multiple linear regression model based on Ordinary Least Square (OLS) with the help of EViews 12 software, at a significance level of 5%. The regression model used aims to test the influence of independent variables on absolute poverty. Before estimating, a classical assumption test was first carried out which included normality, linearity, multicollinearity, autocorrelation, and heteroscedasticity tests to ensure the validity of the model. Furthermore, a statistical test was carried out consisting of a determination coefficient test ($R^2$) to measure the model's ability to explain dependent variables, a simultaneous test (F test) to determine the influence of independent variables together, and a partial test (t test) to test the influence of each independent variable on the dependent variable. With this approach, the research is expected to be able to provide an empirical picture of the factors that affect absolute poverty in the research area.

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## IV. Results and discussion

### 4.1. Research Results

In this study, three independent variables were used which were assumed to have an effect on one bound variable. The free variables include Average School Length (X1), Gross Regional Domestic Product (GDP) per capita (X2), and Unemployment Rate (X3) in Meranti Islands Regency during the period 2010 to 2024. These three variables are included in the category of ratio units. Meanwhile, the bound variable in this study is Absolute Poverty (Y) in Meranti Islands Regency in the period 2010 to 2024, which is also expressed in ratio units. The determination of these variables aims to determine the extent to which factors of education, economic growth, and unemployment rate affect the absolute poverty rate in the region. The following is the average data on school age, gross regional domestic product per capita and unemployment and its comparison with absolute poverty in Meranti Islands Regency:

**Table 1. Data on RLS, GDP Per Capita, Unemployment and Absolute Poverty in Meranti Islands Regency in 2010-2024**

| Year | Average School Length (X1) (Years) | GDP Per Capita (X2) (Rupiah) | Unemployment (X3) (Soul) | Absolute Poverty (Y) (Soul) |
|---|---|---|---|---|
| 2010 | 6,12 | 49379677,14 | 11791 | 73099 |
| 2011 | 6,27 | 52472938,46 | 15205 | 67848 |
| 2012 | 6,8 | 55796933,33 | 15326 | 64693 |
| 2013 | 7,33 | 57760108,25 | 12501 | 60983 |
| 2014 | 7,44 | 59974095,86 | 21125 | 61110 |
| 2015 | 7,45 | 61273199,15 | 10273 | 57952 |
| 2016 | 7,46 | 62865518,91 | 8577 | 54795 |
| 2017 | 7,47 | 64525387,76 | 3865 | 51741 |
| 2018 | 7,48 | 66736651,99 | 5962 | 50945 |
| 2019 | 7,51 | 68077308,7 | 5436 | 49796 |
| 2020 | 7,7 | 61644002,72 | 7475 | 49956 |
| 2021 | 7,84 | 62601948,01 | 4060 | 48689 |
| 2022 | 7,88 | 63968982,49 | 5048 | 47098 |
| 2023 | 7,99 | 66422510,87 | 5437 | 45487 |
| 2024 | 8,12 | 68469995,29 | 4977 | 44449 |

Source: BPS Meranti Islands Regency, 2025 and Meranti Islands Regency Education and Culture Office 2025 (data processed)

a. Multiple Linear Regression Analysis

Multiple linear regression analysis is used to measure the extent to which *more than one* independent variable affects one *dependent variable* in the period from 2010 to 2024. In this study, the independent variables used included average length of schooling (X1), Gross Regional Domestic Product (GDP) per capita (X2), and unemployment (X3), while the bound variable was absolute poverty (Y). The data used is secondary data from 2010 to 2024. The process of processing and analyzing data is carried out with the help of the Eviews 12 software. The results of multiple linear regression analysis obtained through Eviews 12 are presented as follows:

**Table 2. Multiple Linear Regression Test Results**

| Variable | Coefficients | Probability |
|---|---|---|
| C | 135700,4 | 0,0000 |
| X1 | -7905,662 | 0,0007 |
| X2 | -0,000428 | 0,0484 |
| X3 | 0,469302 | 0,0024 |

Source : Processed Data Eviews 12, 2025

From the results of the multiple linear regression above, the following equations are obtained:

$$Y = a + b1X1+b2X2+b3X3+e$$

$$Y = 135700.4– 7905.662X1- 0.000428X2+ 0.469302X3+e$$

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b. Classic Assumption Test

The classical assumption test is an important stage in multiple linear regression analysis that aims to ensure that the regression model used meets the statistical requirements so that the results of the analysis are valid and reliable. This test is carried out to detect violations of basic assumptions in regression, such as normality, multicollinearity, heteroscedasticity, and autocorrelation. The normality test aims to see if the residual data is normally distributed, while the multicollinearity test is used to determine the presence of strong relationships between independent variables. Heteroscedasticity tests are performed to ensure that residual variance is constant, and autocorrelation tests are used to detect the presence or absence of correlations between residuals from one period to another. If all classical assumptions are met, then regression models can be said to be feasible for use in hypothesis testing and drawing research conclusions.

c. Normality Test

The normality test is one part of the classical assumption test which aims to find out whether the residual data in the regression model is normally distributed or not. The normal distribution of residual is important because it is the basis for the validity of statistical tests, such as the t-test and the F-test, in determining the significance of the relationship between variables. If the residual spreads normally, then the regression model can be considered good and the results of the analysis are more reliable. Normality tests are usually carried out using graph methods such as histograms and normal probability plots, as well as statistical tests such as the Jarque-Bera test. In this study, the normality test was carried out using Eviews 12, and the model was declared to meet the normality assumption if the Jarque-Bera probability value was greater than the significance level of 0.05. The following are the results of the normality test using Eviews 12:

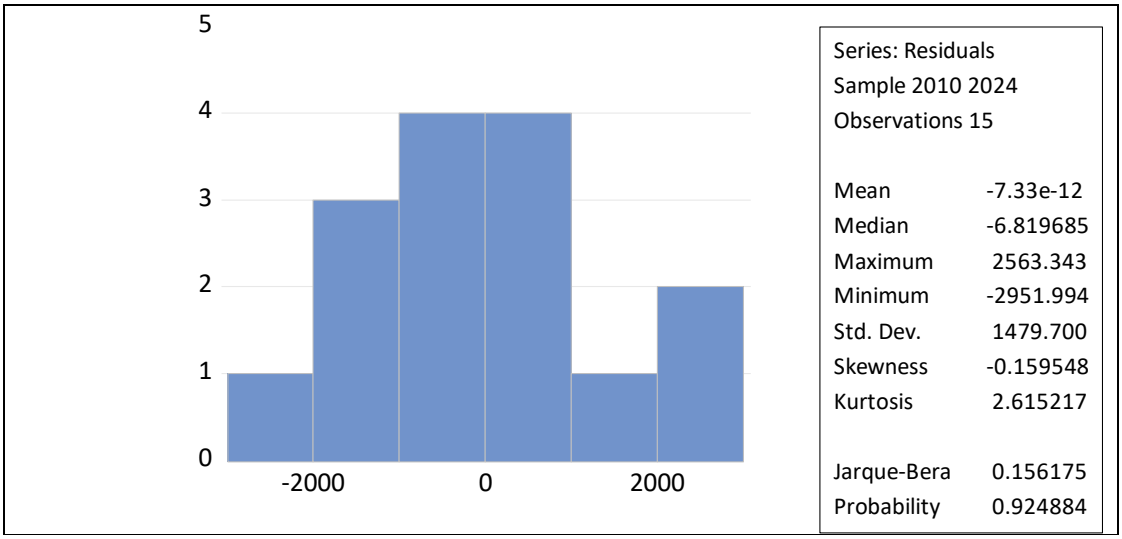


**Figure 1. Normality Test Results**

In the image above, the output of Eviews 12 states that the Jarque-Bera probability value is 0.924884 (>0.05), so the data is distributed normally.

d. Linearity Test

The linearity test aims to ensure that the relationship between the free variable and the bound variable is linear. This test is carried out so that the regression model used truly reflects the proportional relationship between the change of the free variable and the bound variable. If the relationship that occurs is not linear, then the results of regression analysis can be biased and inaccurate. Linearity tests are usually done through statistical testing such as the Ramsey RESET test. The model is said to meet the assumption of linearity if the probability value of F is calculated to be greater than 0.05, then the regression model meets the assumption of linearity and vice versa. The probability value of the F calculation can be seen on the F-line of the probability column statistics, following the results of the linearity test:

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**Table 3.Results of the Linearity Test**

| Ramsey Reset Test | Value | df | Probability |
|---|---|---|---|
| t-statistic | 1,635953 | 10 | 0,1329 |
| F-statistic | 2,676341 | (1,10) | 0,1329 |
| Likelihood ratio | 3,557284 | 1 | 0,0593 |

Based on the table above, the F-calculated value indicated by the F-statistical probability of 0.1329 is greater than 0.05. Thus, it can be concluded that the model in this study has fulfilled the assumption of linearity. This means that all independent variables, namely average length of schooling, Gross Regional Domestic Product (GDP) per capita, and unemployment, have a linear relationship with the bound variable, namely absolute poverty.

e. Multicollinearity Test

The multicollinearity test is a test that aims to find out whether or not there is a strong relationship between independent variables in the regression model. The existence of multicollinearity can cause the estimation results to be unstable, where the regression coefficient is difficult to interpret due to the overlap of information between independent variables. Therefore, this test is important to do so that the regression model used can produce accurate estimates. The multicollinearity test is usually carried out by looking at *the value of the Variance Inflation Factor* (VIF). If the VIF value is less than 10 (<10.00), then it can be concluded that the regression model does not experience multicollinearity problems. The following is a multicollinearity test using Eviews 12:

**Table 4. Multicollinearity Test Results**

| Variable | Centered VIF |
|---|---|
| C | OR |
| X1 | 4,821436 |
| X2 | 5,861609 |
| X3 | 1,879954 |

In the table above, the results of the multicollinearity test show the value of *Centered VIF* of the X1 variable of 4.821436, the X2 variable of 5.861609 and the X3 variable of 1.879954. All three variables have a value of < 10.00. So it can be interpreted that there is no multicollinearity among free veriables.

f. Autocorrelation Test

This test aims to detect whether there is a correlation between the residual in one observation and the residual in the other observation in the regression model. Autocorrelation generally occurs in time series data, where errors in the previous period affect errors in the next period. The existence of autocorrelation can cause regression estimation results to be inefficient and reduce the accuracy of hypothesis testing. To detect autocorrelation, one of the methods that is often used is *the Breusch-Godfrey Serial Correlation LM test*, where if the probability value *of Obs*R-squared* is greater than 0.05, then there is no autocorrelation in the model. Here's an autocorrelation test using Eviews 12:

**Table 5.Autocorrelation Test Results**

| Breusch-Godfrey Serial Correlation LM test | Coefficients | Probability |
|---|---|---|
| F-statistic | 0,113380 | 0,8941 |
| Obs*R-squared | 0,369646 | 0,8317 |

In the table above, you can see the probability value *Obs*R-squared* 0.8317 > 0.05 so that it can be interpreted that the regression model does not autocorrelation.

g. Heteroscedasticity Test

The heteroscedasticity test is part of the classical assumption test used to detect the presence or absence of residual *variance* differences in each observation in the regression model. When *the residual variance* is not the same or variable, the condition is called heteroscedasticity, which can cause the estimation results to be less efficient and the statistical test to be no longer valid and if otherwise the residual *variance*

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is the same or fixed, it is called homokedasticity. The condition for homogeneity is that the probability value *of Obs*R-squared* is greater than 0.05. Here are the results of White's estimate using Eviews 12:

**Table 5. Results of the Hetroscedasticity Test**

| Heteroskedasticity Test: White | Coefficients | Probability |
|---|---|---|
| F-statistic | 3,724045 | 0,0808 |
| Obs*R-squared | 13,05278 | 0,1602 |
| Scaled explained SS | 5,669002 | 0,7725 |

Based on the table above, it can be concluded based on the results of the heteroscedasticity test of the White test, the probability value of Obs*R-squared is 0.1602 > 0.05. So it can be interpreted that this regression model does not have heteroscedasticity.

h. Statistical Test

Statistical tests are performed on hypotheses to prove whether the hypothesis that has been formulated is acceptable or rejected and to see how much influence independent variables have on dependent variables. In this study, the tests carried out consisted of a determination coefficient (R2), simultaneous tests (F Test) and partial tests (t Tests). The following statistical test using Eviews 12:

**Table 6. Statistical Test Results**

| Variabel | Coefficients | Std.Error | t-Statistics | Probability |
|---|---|---|---|---|
| C | 135700,4 | 7972,838 | 17,02034 | 0,0000 |
| X1 | -7905,662 | 1692,468 | -4,671086 | 0,0007 |
| X2 | -0,000428 | 0,000193 | -2,220023 | 0,0484 |
| X3 | 0,469302 | 0,119537 | 3,925987 | 0,0024 |

| | | | |
|---|---|---|---|
| R-squared | 0,970842 | Mean dependent var | 55242,73 |
| Adjusted R-squared | 0,962890 | S.D. depedent var | 8665,526 |
| S.E. of regression | 1669,327 | Akaike info criterion | 17,90141 |
| Sum squared resid | 30653184 | Schwarz criterion | 18,09022 |
| Log likelihood | -130,2606 | Hannan-Quinn criter | 17,89940 |
| F-statistics | 122,0850 | Durbin-Watson stat | 1,825191 |
| Prob(F-statistic) | 0,000000 | | |

i. Coefficient of Determination (R2)

The coefficient of determination ($R^2$) is a statistical measure used to determine how much variation of bound variables can be explained by independent variables in a regression model. The value of $R^2$ ranges from 0 to 1, where a value close to 1 indicates that the model has a strong ability to explain data variations, while a value close to 0 indicates that the free variable has a weak influence on the bound variable. Thus, the higher the $R^2$ value, the better the regression model is in describing the relationship between the variables studied. However, a high $R^2$ does not necessarily guarantee that the model is valid, so it needs to be supported by other statistical tests such as the F-test and the t-test to ascertain the significance of the relationship between variables. Based on the data that has been processed, an Adjusted R-squared value of 0.962890 is obtained, which means that about 96 percent of the variation in absolute poverty can be explained by Average School Age, Gross Regional Domestic Product Per Capita and Unemployment. Meanwhile, about 3.7 percent is explained by variables outside the model.

**j.** Simultaneous Test (F Test)

The simultaneous test or F test is one of the statistical tests used in regression analysis to find out whether the independent variables together have a significant effect on the bound variables. In other words, this test is used to test the hypothesis of whether all the regression coefficients of independent variables are equal to zero or not. If the F-statistical probability value is less than 0.05, it means that the independent variable simultaneously has a significant effect on the bound variable. Conversely, if the F-statistical probability value is greater than 0.05, then the free variables are considered to have no effect together on the bound variables. This F-test is important to assess the feasibility of the regression model as a whole before proceeding to partial testing using the t-test. Based on the data that has been processed, the F-statistical probability results are obtained of 0.000000 < 0.05 so that it can be concluded that the variables Average

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School Age, Regional Gross Domestic Product Per Capita and Unemployment together have a significant effect on the Absolute Poverty variable. It can be concluded that alternative hypotheses are accepted.

k. Partial Test (t-test)

Partial tests or t-tests are used to determine the influence of each independent variable individually on the bound variables in the regression model. Through this test, it can be seen whether or not each independent variable has a significant influence on the dependent variable. The test was carried out by comparing the probability value with 0.05. If the probability value < 0.05, then the free variable has a significant effect on the bound variable, while if the probability > 0.05, then the effect is considered insignificant. The t-test helps researchers understand the contribution of each independent variable in explaining variations in bound variables. Based on the data that has been processed, it is known that the value of each independent variable is as follows:

1) Average School Length

From the results of the test, the probability value of the Average School Length variable is 0.0007 < 0.05, so it can be concluded that the Average School Length has a negative and significant effect on Absolute Poverty. It can be concluded that alternative hypotheses are accepted.

2) GDP Per Capita

From the results of the test, it was obtained that the probability value of the GDP per capita variable was 0.0484 < 0.05, so it can be concluded that the GDP per capita variable has a negative and significant effect on absolute poverty. It can be concluded that alternative hypotheses are accepted.

3) Unemployment

From the results of the test, the probability value of the Unemployment variable is 0.0024 < 0.05, so it can be concluded that the Unemployment variable has a positive and significant effect on Absolute Poverty. It can be concluded that alternative hypothesis is acceptable. Based on the results of multiple linear regression, classical assumption test and statistical test, it can be interpreted as follows:

a) The constant value obtained is 135700.4, so it can be interpreted that if the independent variables, namely the average length of schooling, GDP per capita and unemployment are considered constant, then the value will be equal to absolute poverty of 13,5700 people.
b) The value of the coefficient of the average length of school is -7905.662, so it can be interpreted that if the average length of school increases by one year, it will reduce absolute poverty by 7905.662 rounded to 7906.
c) The value of the coefficient of GDP per capita is -0.000428, so it can be interpreted that if the GDP per capita increases by one unit, it will reduce absolute poverty by 0.0428.
d) The value of the coefficient of unemployment is 0.469302, so it can be interpreted that if unemployment increases by one unit, it will increase absolute poverty by 46.9302 rounded to 47.

4.2. Discussion

a. The Effect of Average School Age, GDP Per Capita and Simultaneous Unemployment on Absolute Poverty in Meranti Islands Regency

The results of the F (Simultaneous) test show that the F-statistical probability value is 0.000000 (< 0.05), which can be concluded in this study that the average length of schooling, gross regional domestic product per capita and unemployment simultaneously have a significant effect on absolute poverty.

These results are in line with the research (Fatmasari, 2018) The Influence of GDP, Education and Unemployment on Poverty in East Java in 2006-2015. The results of this study show that simultaneously GDP, education and unemployment have a significant effect on poverty in East Java Province.

b. The Effect of Average School Length on Absolute Poverty in Meranti Islands Regency

The results of the t-test (partial) showed that the average length of schooling with a coefficient value of -7905.662 stated that with one unit increase in the average length of schooling, the number of absolute poverty would decrease by 7906. The probability value of the variable of average school age is 0.0007 (<0.05), so it can be concluded that in this study the variable of average school time has a significant effect on absolute poverty. These results are in line with the research (Nizar and Arif, 2023) The Effect of Average School Length,

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Per Capita Expenditure, Regional Original Income, Investment, and Open Unemployment Rate on Poverty Rates in West Nusa Tenggara in 2012-2021. The results of the study showed that the average length of school had a significant influence on the poverty rate, as well as per capita expenditure and open unemployment rate which partially had a negative and significant effect on the poverty rate.

These findings show that the higher the level of education of the population, the greater their chances of obtaining decent jobs and higher incomes, thus being able to get out of poverty. Education plays an important role in improving the quality of human resources, which in turn can encourage the productivity and economic well-being of the community. This is in line with *Human Capital* theory which states that education is a form of investment in human capital that can increase a person's productivity and income.

As for the projection of the average length of school in the following years using data on the average length of school in the study and the linear trend calculation method, the results were obtained: The results of the projection showed a consistent increasing trend during the study period. This increase reflects an improvement in access to and participation in education in Maeranti Islands Regency. However, when compared to other districts/cities in Riau Province, the achievement of RLS is still relatively lower than Pekanbaru City and Kampar Regency which have more complete educational facilities and higher urbanization rates. However, the projection of the Meranti Islands Regency RLS shows a fairly positive growth rate so that it has the potential to reduce the education gap between regions in Riau in the long term.

In general, the projected RLS score is still below the ideal 12-year figure reflecting the completion of education up to the upper secondary level. This shows that most of the population has not fully completed the level of education in accordance with the government's targets. Compared to developed areas such as Pekanbaru City which are close to compulsory learning standards, the research area still faces challenges in the equitable distribution of education, especially related to limited facilities, geographical conditions, and community economic factors. However, the projected trend of increasing RLS indicates progress in line with the government's efforts to encourage the achievement of compulsory learning, so it is hoped that in the long term the education gap can continue to reduce. Thus, it can be concluded that the increase in the average length of schooling in Meranti Islands Regency has contributed significantly to the reduction of absolute poverty. Therefore, regional development policies need to be focused on improving the quality of education, equitable distribution of learning facilities, and community empowerment so that the positive impact of education can be felt widely and sustainably.

c. The Effect of Gross Regional Domestic Product Per Capita on Absolute Poverty

The results of the t-test (partial) show that the gross regional domestic product per capita with a coefficient value of -0.000428 states that with one unit increase in the gross regional domestic product per capita, it will reduce the number of absolute poverty by 0.0428. The probability value of the variable of gross regional domestic product per capita is 0.0484 (<0.05), so it can be concluded that in this study the variable of gross regional domestic product per capita has a negative and significant effect on absolute poverty. These results are in line with the research (Manalu *et al.,* 2023) Analysis of the Effect of GDP Growth Rate, GDP Per Capita and Gini Ratio on the Poverty Level of Central Java Province in 2013-2022. Where GDP per capita has a partial effect on the poverty rate in Central Java Province. And simultaneously together with the GDP growth rate and the Gini ratio have an effect on the poverty level in Central Java Province.

This is in line with the Neoclassical Theory which states that high economic growth must be accompanied by equity. In the neoclassical view, a high GDP per capita will have a positive impact on poverty reduction, only if such growth is inclusive and efficient, and accompanied by equitable distribution policies. The results of the GDP per capita projection show an increase from year to year, which indicates fairly stable regional economic growth. Compared to other regencies/cities in Riau such as Siak Regency and Dumai City which have a more dominant industrial and oil and gas sector, the GDP value per capita of the research area is still in the medium category. However, the projected growth shows the potential for strengthening the local economy, especially from the region's leading sectors, which is expected to be able to encourage sustainable improvement in community welfare.

The results of this study illustrate that the increase in the Gross Regional Domestic Product (GDP) per capita in the Meranti Islands Regency has significantly contributed to the decrease in the number of poor people. This shows that economic growth in the area is starting to be able to create an effect of income equality and improving people's welfare. When GDP per capita increases, people's economic activities also increase through the opening of new jobs, increasing productivity, and increasing business opportunities. This condition reflects that economic growth in Meranti Islands Regency is not only enjoyed by certain groups, but also felt by low-income people.

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d. The Effect of Unemployment on Absolute Poverty in Meranti Islands Regency

The results of the t-test (partial) show that unemployment with a coefficient value of 0.469302 states that with one unit increase in unemployment will reduce the number of absolute poverty by 47. The probability value of the unemployment variable is 0.0024 (<0.05), so it can be concluded that in this study the unemployment variable has a positive and significant effect on absolute poverty. These results are in line with the research (Fatmasari, 2018) The Influence of GDP, Education and Unemployment on Poverty in East Java in 2006-2015. Where the results of the study show that unemployment has a positive and significant effect on poverty in East Java Province, while GDP and education partially have a negative and significant effect on poverty in East Java Province. This result is in line with Keynesian theory which states that a decline in aggregate demand in the economy causes companies to reduce production and lay off employment, which ultimately increases the number of unemployed. When a person loses a job, they lose their primary source of income, which reduces their purchasing power and ability to meet basic needs such as food, education, and health. This drives individuals or families to fall into poverty. Within a Keynesian framework, this creates a negative spiral effect, where rising poverty further weakens aggregate demand, worsens economic conditions, and expands unemployment.

The projected unemployment variable shows a fluctuating trend but generally decreases. This decrease indicates an improvement in the absorption of labor in the research area. When compared to several other districts/cities in Riau, such as Pekanbaru City which has a relatively higher unemployment rate due to urbanization and labor competition, the research area tends to have lower unemployment. This shows that the local economic structure is still dominated by the informal and agricultural sectors which are able to absorb a wider workforce. This condition is also reflected in the Meranti Islands Regency, where the unemployment rate has a close relationship with the increase in the number of poor people. This district still faces challenges in providing adequate employment, especially in productive sectors such as the processing industry, fisheries, and agriculture which are the main focus of the regional economy. Limited employment opportunities cause many of the workforce to not be well absorbed, resulting in low community income and increased vulnerability to poverty. In addition, the low skills of the local workforce and the lack of industrial investment also exacerbate the unemployment situation in the region.

## V. Conclusion

1. Simultaneously, the three independent variables, namely average length of schooling, gross regional domestic product per capita, and unemployment have a significant effect on absolute poverty in Meranti Islands Regency. Together, these variables have a significant relationship with absolute poverty rates. In addition, a determination coefficient value ($R^2$) was also obtained which showed that the three independent variables were able to explain the variation in the change in the dependent variable, namely absolute poverty, of ninety-six percent, while the rest was explained by other factors outside this research model. Thus, it can be concluded that the model used has a very good ability to explain the relationship between educational, economic, and employment factors to absolute poverty in Meranti Islands Regency.
2. The average length of school has a negative and significant influence on absolute poverty in Meranti Islands Regency. This means that an increase in the average length of school will lower the absolute poverty rate in the region, so that the higher the education level of the community, the lower the likelihood of them being in poverty.
3. Gross regional domestic product per capita also shows a negative and significant influence on absolute poverty in Meranti Islands Regency. It indicates that an increase in GDP per capita, which describes an improvement in people's economic well-being, will contribute to a reduction in the absolute poverty rate.
4. Unemployment has been proven to have a positive and significant influence on absolute poverty in Meranti Islands Regency. This shows that the higher the unemployment rate in a region, the higher the absolute poverty rate, the higher the absolute poverty rate. This condition illustrates that the absence of adequate employment has a direct impact on declining people's income and increasing vulnerability to poverty.

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