

Level of Analysis of Factors Contributing to the High Unemployment Rate in Madiun Regency

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Abstract

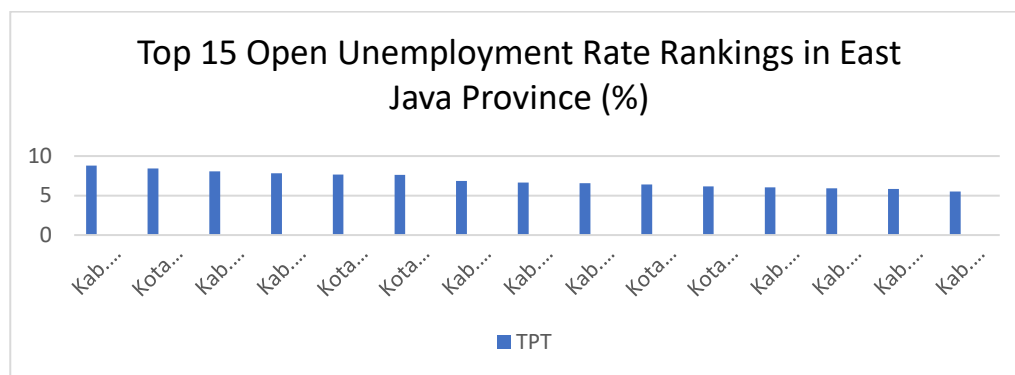
The crucial problems in Indonesia include several things, one of which is unemployment. Various efforts have been made by the Indonesian government to overcome the problem of unemployment. Regarding the condition of the population, the average length of schooling, minimum wage, and GDP in Madiun Regency, it is necessary to conduct an impact analysis to see factors that can increase open unemployment in Madiun Regency. The approach taken by the researcher utilizes a quantitative approach, by applying the multiple linear regression analysis method through the ordinary least square. The data used is secondary data, namely data on the Open Unemployment Rate, Number of Population, Average Length of Schooling, Minimum Wage, and GDP during the 2008-2022 period. The results of this study are that the number of population has a significant negative effect on open unemployment in Madiun Regency, the average length of schooling has a significant positive effect on open unemployment in Madiun Regency, the minimum wage has no significant effect on open unemployment in Madiun Regency, and the Gross Regional Domestic Product has a significant positive effect on open unemployment in Madiun Regency. With these results, the Government is expected to create policies that can influence efforts to reduce budgeting in Madiun Regency.

Keywords: Number of Population, Average Length of School, Minimum Wage, GDP, Open Unemployment Rate



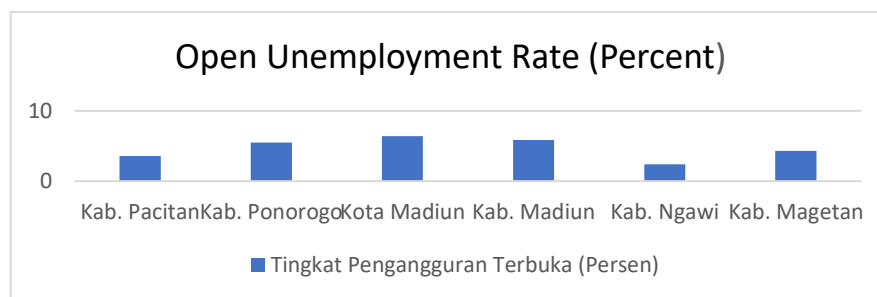
INTRODUCTION

Crucial problems in Indonesia include the problem of unemployment. Although the government has tried hard to overcome it, this challenge has not been solved over time. The urgency of dealing with the problem of unemployment is very important because it can result in various serious social problems (Khatijah Ishak, 2018). The high unemployment rate must be overcome immediately so as not to cause various social problems.



Top 1 Chart of East Java Province's Open Unemployment Rate Ranking
Source : Central Statistics Agency

In 2022, Madiun Regency ranked 14th out of 38 Regencies and Cities in East Java Province in terms of open unemployment rate, which shows that the unemployment rate is still quite high. In a smaller scope, namely the Madiun Residency, Madiun Regency is in second place out of six Regencies/Cities.

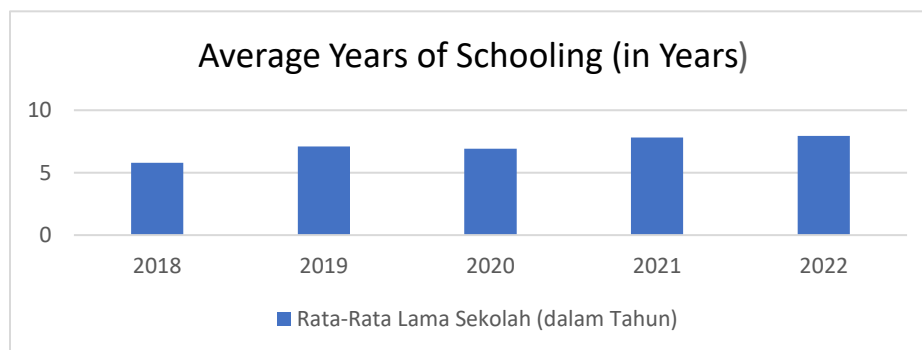


Graphs 1 Open Unemployment Rate of Madiun Residency
Source : Central Statistics Agency

The high percentage of open unemployment rate in Madiun Regency is quite high compared to other regions, of course, due to several factors. One of them is due to the policy during the Covid-19 pandemic outbreak which resulted in many employees being dismissed from their jobs (Franita & Fuady, 2019). This is also due to the large number of population, where the more population will increase the number of labor force. The number of people in Madiun Regency continues to increase, especially from 2019 to 2020. The increase occurred by 20,000 people within one year. This shows that the more population, the greater the demand that must be met.

In addition to the number of population, the level of public education is also related to the existence of open unemployment because the level of education of the workforce determines the quality of the workforce. Education is important because every available job requires special skills in their field. The level of education greatly affects the quality of the workforce, the high level of education will tend to determine the quality of the human resources of the workforce (Prakoso, 2020). Education has an important role in improving the quality of human resources. With higher education, a person's employability and productivity increase, which in turn is expected to reduce the unemployment rate.

Graphs 2 Average School Length in Madiun Regency



Source : Central Statistics Agency

Based on the graph above, it can be seen that there is an increase every year. However, the average educational achievement of people in Madiun Regency is still relatively low, which is only 6.6 years.

In addition to these factors, there are also other factors, namely related to wages or salaries. The minimum wage in Madiun Regency has increased every year until as of 2022 it reaches IDR 1,958,410,- The determination of wages carried out by the government can have an influence on the rise and fall of the unemployment rate. When the government sets a high wage value, the company will reduce the number of existing

workers, resulting in an increase in the unemployment rate. Low wages result in the workforce not being interested in applying for jobs, which can encourage an increase in the existing unemployment rate

Furthermore, there are other factors related to open unemployment, namely GDP or Gross Regional Domestic Product. To find out the level of economic development of a region is to look at GDP which is one of the macroeconomic indicators. According to data from the Central Statistics Agency of Madiun Regency, the value of GDP over the last five years has fluctuated although not large enough, namely from 2019 to 2020. The increase in Madiun Regency's GDP cannot be separated from the role of the local government in implementing efficiency and policy effectiveness in reducing unemployment, namely by accelerating economic development by prioritizing sectors or economic activities that have the potential to develop.

Based on the background description, the high unemployment rate must be overcome immediately so as not to cause various social problems. The government must strive to increase existing employment opportunities and provide entrepreneurship training so that the number of unemployed can be suppressed. Because if left unchecked, unemployment will have the potential to cause poverty. Regional governments must also implement policies that are in accordance with current conditions so that the unemployment rate can be overcome.

LITERATURE REVIEW

Unemployment Theory

According to Malthus's theory in (Sukirno, 2010) said that the number of people who will continue to grow indefinitely until they exceed the supply limit will cause competition in ensuring survival by looking for food sources. This means that the higher the population growth, the more labor will be created so that if it is not balanced, it will increase unemployment. Unemployment is one of the important initiators in the field of employment where the unemployment rate can measure the amount of absorption of the labor force by available jobs (Rambe et al., 2019). In this study, the type of open drawing used as a variable. Open unemployment itself is the entire workforce that has not worked and is still trying to get a job (Masriah & Mujahid, 2011).

Population Theory

According to Adam Smith and David Ricardo, with the functioning of the population as a workforce, if there is an increase in unemployment in an area, it is due to an increase

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in the number of people without any additional jobs (WIJAYANTO, 2022). Thus, residents play the role of experts who play a role in economic activities (Adam Smith in Mulyadi, 2017).

Theory of Average Length of School

This theory Becker in his book entitled "human capital", in his book it is explained that this theory has an urgency that education plays an important role in economic growth. Becker also explained that when a person takes a higher education, the job they get will be better, which will reduce the potential for unemployment (Syahputra et al., 2019).

Minimum Wage Theory

The minimum wage can be explained through the theory presented by Payaman Simanjuntak. This theory conveys that if the wage level is higher, it can affect the increase in production costs. This is because the company will incur greater costs to meet the salaries of its workers. If viewed in terms of labor demand, it will be considered bad because by increasing wages, the company will spend more to provide salaries (Wijaya, 2014).

Economic Growth Theory

This Gross Regional Domestic Product (GDP) can be explained through Harrod Domar's theory where if output growth is high, unemployment will increase. Harrod-Domar stated that the Gross Regional Domestic Product (GDP) and the unemployment rate have a positive relationship because economic growth is not accompanied by an increase in production capacity so that the unemployment rate continues to increase. This is due to increasing economic growth oriented towards capital density (Priastiwi, 2019).

RESEARCH METHODS

Research Location

The location of this study focuses on the Madiun Regency area, East Java Province, because data from BPS shows that in the last fifteen years (2008-2022) there has been an increase in open unemployment every year in the district.



Data and data sources

The data used is a type of secondary data taken from BPS. The existing secondary data are data on the Open Unemployment Rate, Number of Population, Average Length of School, Minimum Wage, and GDP during the 2008-2022 period.

Data Analysis

Multiple linear regression analysis method through ordinary least square. By using this method, it is possible to see the influence of the free variable (X1, X2, X3, X4) or not on the bound variable (Y). In estimating the multiple linear regression model, tests can be carried out using tests including autocorlation test, multicorlation, heteroscedasticity, normality test, T test, F test and determinant coefficient test. Multiple Linear Regression Model Equations (Hambasari & Inggti, 2016)

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$$

Information:

Y = Open Unemployment Rate (percent)

X1 = Total Population (Soul)

X2 = Education Level (Years)

X3 = Minimum Wage (rupiah)

X4 = GDP (million rupiah)

β_0 = Constant value

β = Regression coefficient value

e =residual (error):

RESULT**Determination coefficient test (R2)**

The determination coefficient (R2) test aims to measure the ability of the regression model that has been used in the study to be able to explain how much influence the independent variable has on the dependent variable through the R square value.

Table 1. Coefficient of Determination Test

Coefficient of Determination	
<i>R-Squared</i>	0,800

Source: Data processed, SPSS 2024



Based on the table above, it can be seen that the value of the determination coefficient is 0.800 which means that the variables of population (X1), average length of school (X2), minimum wage (X3), and GDP (X4) affect the variable of the open unemployment rate (Y) by 80%, while the remaining 20% is influenced by other variables that are outside the model in this study.

Test Stats F

The F test in the study was carried out to find out whether the independent variables used in this research model had a simultaneous influence on the dependent variables. The thing that is used as the basis for making decisions in this F test is that if the results obtained are $F_{cal} > F_{table}$, then H_0 is rejected and H_1 is accepted, then the independent variables have a simultaneous effect.

Table 2. Coefficient of Determination Test

Fcal	Ftable	Condition	Sign.	Condition	Ket
10,012	3,36	$F_{cal} > F_{table}$	0,002	<0.05	

Source: Data processed, SPSS 2024

If you look at the table above, you can see that the p-value has a value of 0.002 where the value is less than 0.05. The table shows that the F value of the calculation is 10.012 and the F value of the table is 3.36 which is obtained from the F table at a significance level of 5% with the known value of df (4; 15) thus the F table value is obtained. The significance value on the F test is 0.002 which means it has an effect.

Regression Equation Model

The following are the results of the multiple linear regression test in the research conducted

Table 3. Multiple Linear Regression Test

Type	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	2.221	2.284	
Population	0,00001637	.000	-1.064

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Average Length of School	1.485	.370	.751
District Minimum Wage	0,0000000234	.000	.007
GDP	0,0000004405	.000	.792

Source: Data processed, SPSS 2024

Based on the results of the multiple linear regression test above, the multiple linear regression equation is obtained as follows;

$$Y = 2,221 - 0,00001637X_1 + 1,485X_2 + 0,0000000234X_3 + 0,0000004405X_4 + e$$

Source: Data processed, SPSS 2024

1. Constant = 2,221

It shows that the sum of the population value (X1), the average school length value (X2), the minimum wage value (X3), and the pDRB value (X4) are constant. This will increase the open unemployment rate by 2.221 percent.

2. Population Constant = -0.00001637

It shows that if the variable value of the population decreases by one person, then the variable of open unemployment will increase by -0.00001637 percent

3. Average School Length Constant = 1,485

It shows that if the variable value of the average length of schooling increases by one year, the variable of open unemployment will increase by 1.485 percent.

4. Minimum Wage Constant = 0.0000000234

It shows that if the minimum wage variable increases by one rupiah, the variable of open unemployment will increase by 0.0000000234 percent.

5. Gross Regional Domestic Product Constant = 0.0000004405

It shows that if the value of GDP increases by one million rupiah, the variable of open unemployment will increase by 0.0000004405 percent.

Test Statistics t

The t-test has the purpose of testing hypotheses and finding out the influence of partially independent variables on dependent variables. The following are the results of the t-test.

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Table 4. Test Statistics t

Partial Test t		
Variable	Sign	t
Total Population (x1)	0,002	-4.111
Average Length of School (x2)	0,002	4.010
District Minimum Wage (X3)	0,977	.030
GDP (x4)	0,007	3.365

Source: Data processed, SPSS 2024

1. Based on the table of the results of the t-test on the population variable (X1), it was obtained that $t_{count} = -4.111 > t_{table} = 2.228$ and a significance value of $0.002 < 0.05$. Therefore, H_0 is rejected and H_1 is accepted so that there is a significant influence between the number of population (X1) and the variable of open unemployment (Y) partially.
2. Based on the table of t-test results on the variable of average length of school (X2), it was obtained that $t_{count} = 4.010 > t_{table} = 2.228$ and a significance value of $0.002 < 0.05$. Therefore, H_0 is rejected and H_1 is accepted so that there is a significant influence between the average length of schooling (X2) on the variable of open unemployment (Y) partially.
3. Based on the table of the results of the t-test on the minimum wage variable (X3), it was obtained that $t_{cal} = 0.03 < t_{table} = 2.228$ and a significance value of $0.977 > 0.05$, then H_0 was accepted and H_1 was rejected so that there was no significant influence between the district minimum wage (X3) on the variable of open unemployment (Y) partially.
4. Based on the table of t-test results on the GDP variable (X4), it was obtained that $t_{count} = 3.365 > t_{table} = 2.228$ and a significance value of $0.007 < 0.05$, then H_0 was rejected and H_1 was accepted so that there was a significant influence between GDP (X4) on the variable of open unemployment (Y) partially.

DISCUSSION**The Effect of Population on Open Unemployment**

Based on the results of the multiple linear regression test that has been carried out, it shows that the variable of population has a significant negative influence partially



on the open unemployment rate in Madiun Regency where if the population decreases, the open unemployment rate will decrease. Over the past 15 years, the population of Madiun Regency has continued to increase, except in 2017 and 2019. However, the rate of population growth decreases every year due to a lower birth rate than the death rate. The low birth rate is due to a lack of financial readiness to get married. Meanwhile, even though the population growth rate is declining, the increase in employment has not been in line with the needs because the improvement of technology and automation has reduced the need for human labor, causing an increase in the unemployment rate in Madiun. This is in line with the results of this study and also in line with Radewa Rizki Mirna Wijaya.

Effect of Average Length of Schooling on Open Unemployment

Based on the results of the multiple linear regression test that has been carried out, it shows that the variable of education level has a significant positive influence partially on the open unemployment rate in Madiun Regency where when the average length of schooling increases, the open unemployment rate will increase. The results are inconsistent with the Human Capital theory which states that the longer a person takes education, the better their quality and the easier it is to get a job, which should reduce the unemployment rate. However, this study shows that when education levels rise, unemployment also rises. The results of this study are in line with research conducted by Angga Syahputra, Erfit, and Nurhayani (2019), which stated that the average length of schooling is a factor that can affect open unemployment. The higher a person's education level, the higher the standard of work he wants. This includes the desire to earn a large wage and good working conditions. However, in Madiun Regency, the wages offered by many companies are still relatively low. As a result, many graduates choose not to work until they find a job that meets their expectations, both in terms of wages and working conditions.

Effect of Minimum Wage on Open Unemployment

Based on the results of the multiple linear regression test that has been carried out, it shows that the minimum wage variable has no influence and is not partially significant on the open unemployment rate in Madiun Regency. The increase in the minimum wage in the Madiun Regency area has no significant effect on the open unemployment rate. This is due to the increase in labor needs along with increasing production activities, so that business actors are looking for alternatives to cover the

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increased costs due to the increase in the minimum wage. Therefore, although the minimum wage increases every year, it does not directly lead to an increase in unemployment. The results of this study are in line with research conducted by Angga Syahputra, Erfit, and Nurhayani (2019) which stated that the minimum wage is not a factor affecting open unemployment.

Effect of Gross Regional Domestic Product on Open Unemployment

Based on the results of the multiple linear regression test that has been carried out, it is shown that the Gross Regional Domestic Product variable has an influence and is partially significant on the open unemployment rate in Madiun Regency. The mainstay sectors in Madiun Regency, such as the agricultural sector and the processing industry, contribute greatly to the increase in GDP. However, industries in this region tend to be capital-intensive and rely more on technology and machines than human labor. As a result, labor absorption is not optimal and only requires labor with certain skills. Technological advances reinforce capital-intensive orientation and reduce the need for human labor, which has an impact on decreasing job opportunities for the less skilled locals. The results of this study are in line with research conducted by Radewa Rizki Mirna Wijaya (2014) which stated that the Gross Regional Domestic Product is a factor that affects open unemployment.

CONCLUSION

The number of population has a significant negative effect on open unemployment in Madiun Regency in 2008-2022. This is due to the limited employment opportunities that are not proportional to the decline in the population, so that some people do not get jobs and unemployment increases. Average School Length has a significant positive effect on open unemployment in Madiun Regency in 2008-2022. The reason is that the higher a person's education, the greater the desire to get a job with maximum wages. They choose not to work until they find the job they want. The Minimum Wage did not have a significant effect on open unemployment in Madiun Regency in 2008-2022. The reason is that the increase in the minimum wage every year is offset by an increase in labor needs in line with the increase in production activities. Business actors are looking for alternatives to cover the increasing costs, so that the minimum wage does not affect open unemployment.



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