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Influencing Factors On Open Unemployment: A Case Study Of Malang Regency

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Abstract

Indonesia's economy is growing with an annual growth rate of between 4.5 and 5.2 percent, with the main focus on development reforms to improve people's welfare, but as a developing country, Indonesia faces serious challenges related to unemployment, which directly impacts individuals and becomes a heavy burden. Malang Regency is the area with the fifth highest unemployment rate in East Java. The purpose of this study is to determine the influence of the Number of Population, Labor Force Participation Rate on the Open Unemployment Rate, Minimum Wage, Human Development Index on the Open Unemployment Rate in Malang Regency. The research method applied in this study is a quantitative descriptive approach with multiple linear regression analysis. The data used in the study is secondary data that has been obtained from the Central Statistics Agency (BPS) of Malang Regency. The data that has been collected is a time series of data starting from 2014 - 2023. The results of the study partially showed that the number of population, labor force participation and human development index had an effect on the open unemployment rate in Malang Regency, while drinking wages had no effect in Malang Regency

Keywords: Number of Population, Labor Force Participation Rate, Minimum Wage, Human Development Index, Open Unemployment Rate

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INTRODUCTION

Indonesia's economy is growing at an annual growth rate of between 4.5 and 5.2 percent, with a primary focus on development reforms to improve people's welfare, strengthen national stability, and create more job opportunities to reduce poverty. Economic development aims to improve the quality of life through sustainable growth and equitable distribution of welfare. To achieve this, it is important to understand the components of economic growth that affect poverty, including capital accumulation, population size, and labor (Edo Permadi, 2021).

A large population can be a capital for development if balanced with job creation, without adequate job opportunities, there will be an increase in unemployment that hampers the economy. High labor force participation rates increase productivity and economic growth, but the benefits are only optimal when accompanied by good quality work and reduced unemployment. An appropriate minimum wage policy can improve worker welfare and productivity, but if it is not in line with the labor market, it can increase unemployment, especially in the informal sector and small businesses. A high Human Development Index (HDI) reflects good access to education, health, and decent incomes, and correlates with better jobs and reduced unemployment, promoting inclusive and sustainable economic development.

Analyzing the effects of population size, labor force participation, minimum wage, and human development index on open unemployment helps design effective economic and social policies to reduce unemployment and support economic development. Community welfare is also affected by the availability of basic facilities such as electricity, clean water, education, health, housing, and infrastructure (Firda Wati, 2019). Economic growth has not been considered successful if it is accompanied by an increasing social burden, unemployment, income inequality, and the number of poor people. Unemployment is increasing because the high labor force is not balanced with adequate job creation (Dwi Mahroji, 2019).

As a developing country, Indonesia faces serious challenges related to unemployment, which has a direct impact on individuals and is a heavy burden. Job losses lead to lower living standards and psychological distress, as well as exacerbate income inequality. Unemployment arises due to the growth of the labor force that is not proportional to the availability of jobs, and can occur even though there are high job opportunities due to limited information and inconsistencies (Iskandar Putong and Nuring Dyah Andjaswati, 2019).

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According to Trading Economics data, Indonesia is the country with the second highest unemployment rate in Southeast Asia in 2023, reaching 5.45%. Despite declining from 5.83% in 2022, East Java, with a population of 41 million people, has the 12th highest TPT in East Java at 5.49%, higher than the national average. This shows that there are still many labor forces that have not found jobs, which has a negative impact on the economy and people's welfare.

Source : Central Statistics Agency of East Java

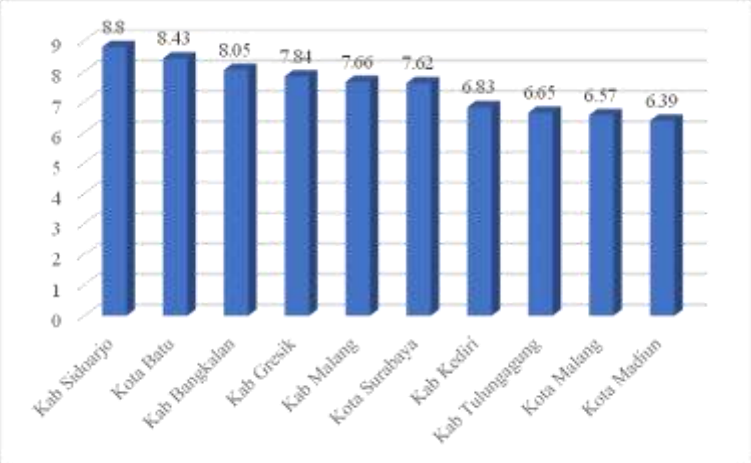


Figure 1 City/Regency with the highest TPT in East Java, 2022 (in percent)

Figure 1 shows that Malang Regency is the area with the fifth highest unemployment rate in East Java. According to BPS data, Malang Regency is included in the 10 regions with high open unemployment, with 97,319 people out of a total labor force of 1,481,324 people. Over the past 4 years, the open unemployment rate in Malang Regency has fluctuated, starting from 53,312 people in 2019, increasing to 81,532 people in 2020, decreasing to 77,267 people in 2021, and increasing again to 90,614 people in 2022.

The rise and fall of the open unemployment rate challenges the Malang Regency government to create more jobs. The leading sectors in 2022 are agriculture, forestry, and fisheries, although the agricultural sector faces a shortage of fertilizers due to differences in planting seasons. The tourism sector also has great potential but faces the

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problem of limited food services. The government must focus on these sectors to create jobs, including empowering MSMEs in the provision of culinary (Malang Regency Directorate, 2022).

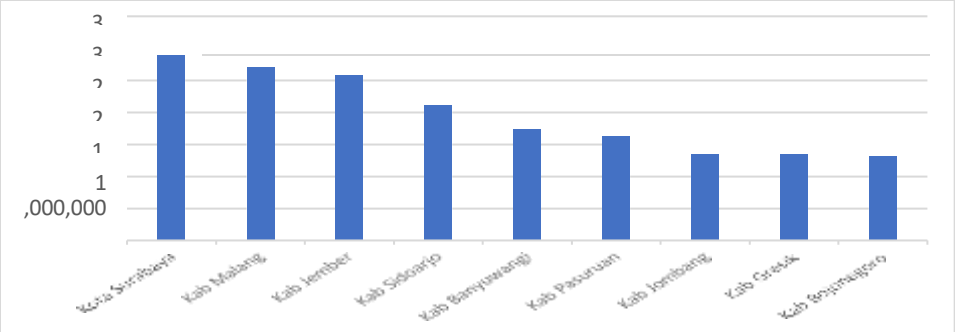


Figure 2. Cities/Regencies with the Highest Population in East Java in 2022

The economy of Malang Regency can be strengthened by developing superior sectors. Investments in sustainable agriculture and forestry technologies can increase crop yields and productivity, opening up more job opportunities in the agriculture and forestry sectors. Advances in the fisheries sector, such as fish farming and seafood processing, can also create jobs. In addition, the development of tourism potential, including infrastructure and promotion, can attract more tourists and create many jobs in the service, hospitality, and creative sectors. By integrating the development of these sectors, the Malang Regency Government can create a dynamic and inclusive economic ecosystem, not only reducing the unemployment rate but also improving the welfare of the community as a whole.

In addition to the problem of poverty, Malang Regency is the second area in East Java with the largest population, with 2,885,900 people, only losing to the city of Surabaya. High population growth can lead to higher poverty rates. Job availability is influenced by age structure and population growth. With the tourism sector, Malang Regency, which is famous for its tourist destinations, can reduce poverty by opening jobs in hotels, restaurants, and tour guide services, as well as improving the regional economy through increasing tourist visits.

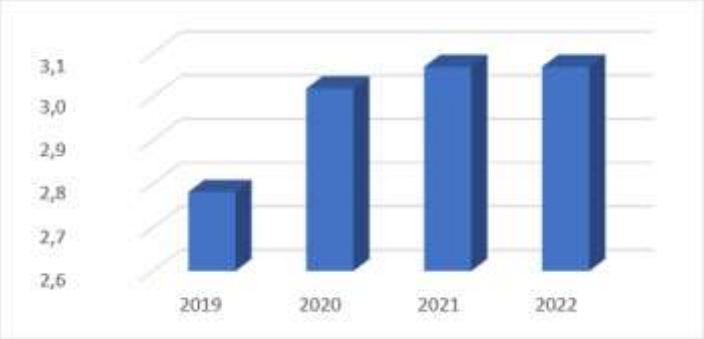
Employment is a major problem in East Java Province, especially in Malang Regency. In 2022, of the 1,481,324 labor force in Malang Regency, 70.38% are involved in economic activities. However, there are 97,319 people or 6.67% who are unemployed. The high level of labor force participation shows positive potential in reducing

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unemployment if supported by the right policies and the development of economic sectors such as tourism (Sholeh, 2019). An important factor that affects the absorption of labor is the minimum wage, which is a monetary reward for workers. The wage level set by the government affects the demand for labor. The minimum wage in Malang Regency is increasing every year, but it is still relatively low compared to other districts/cities in East Java. High wages can increase worker productivity and morale, while workers with higher skills and education have the opportunity to earn higher wages (Gregory & Zierahn, 2022).

Figure 3 Malang Regency Minimum Wage, 2019-2022 (in millions)



Source : Central Statistics Agency of Malang Regency

In 2022, Malang Regency experienced stagnation in the minimum wage (MSE) while the unemployment rate increased, showing that MSEs play an important role in the job market. An increase in MSEs in line with inflation and the cost of living can reduce unemployment by increasing purchasing power and productivity, while the stagnation of MSEs can worsen the unemployment situation. The determination of MSEs must be careful, if it is too high, it can cause unemployment because employers are unable to pay. The right balance is needed so that MSEs can reduce unemployment without harming employers. An effective minimum wage can reduce open unemployment if it is determined according to economic conditions and labor productivity (Silvia Luthfiyah, 2023).

Population density in Malang Regency causes economic and social problems, especially poverty, because the large population is not balanced with basic needs and jobs. The unemployment rate fluctuates every year, influenced by one of them by the level of education. In 2022, the Human Development Index (HDI) of Malang Regency reached 71.38, an increase of 0.78 points from the previous year. The Expected Length of School

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(HLS) increased from 10.78 years in 2011 to 13.38 years in 2022, and the Average Length of School (RLS) increased from 6.35 years to 7.68 years during the same period. These improvements in education, along with social and economic improvements, have a positive impact on the quality of health, education, and spending, and help reduce the risk of unemployment by improving individual skills and knowledge.

If all individuals worked, the unemployment rate and productivity of the community would increase. Education is an important investment that increases productivity and income, as well as people's well-being. Higher average length of schooling contributes to well-being, while high qualification requirements can lead to unemployment for less skilled workers. Malang Regency has shown significant progress in HDI, but still faces challenges in unemployment, development gaps, and health and education services. Joint efforts from the government, the private sector, and the community are needed to ensure inclusive and sustainable development benefits for all citizens.

A large population can support development if there are adequate jobs, but it can lead to unemployment if job opportunities are lacking. High labor force participation rates increase productivity and economic growth, but require quality work. A proper minimum wage improves welfare, but if it is not in line with the market, it can increase unemployment, especially in the informal sector. A high Human Development Index (HDI) reduces unemployment with good access to education, health, and income. Analysis of the effects of population size, labor force participation, minimum wage, and HDI on unemployment is important for economic and social policies. Although the government is trying to overcome unemployment, this problem still exists and needs to be further researched.

LITERATUR REVIEW

Open Unemployment Theory

Classical Theory states that unemployment can be prevented through supply and price mechanisms in the free market, which allows the absorption of the entire labor force (Gilarso, 2019). In the event of an oversupply of labor, wages will fall, so production increases as firms benefit from lower costs. According to Permadi (2021), Solow and Swan's theory states that economic growth depends on an increase in the workforce, the number of population, and capital accumulation. Neoclassical theory adds that increased output comes from improving the quality and quantity of labor, capital, and technological advancements.

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Population Theory

Smith's theory of population growth is similar to Malthus's theory, although it appeared earlier. According to Smith, the population rises if wages exceed subsistence wages, which are necessary to live. Wages above subsistence encourage early marriage, lower child mortality rates, and increase births. Conversely, the population falls if wages are below subsistence, causing child mortality to rise and marriages to be delayed.

Theory of Labor Force Participation Rate

According to Adam Smith, classical economists state that effective allocation of human resources drives economic growth, and the accumulation of physical capital supports it as economic activity increases. Efficient management of human resources is an important requirement for economic growth. Meanwhile, J.B. Say's Classical Theory: Jean Baptiste Say (1767-1832) states that supply creates demand, known as Say's Law. This law explains that the value of production is always equal to income, so an increase in production will increase income and demand.

Minimum Wage Theory

Adam Smith introduced the classic theory that states that wages must be sufficient to meet the basic needs of workers, such as clothing, food, and shelter. The determination of wages also takes into account the number of family members of workers. Proponents of this theory argue that wage increases can encourage population growth because excess wages allow workers to add family members. Conversely, wages below minimum requirements can negatively impact health, nutrition, family education, and reduce the quality of services received. Meanwhile, the Subsistence Wage Theory by David Ricardo adds a dimension to wage determination by considering labor demand, not just supply. Ricardo stated that sufficient wages can encourage workers to marry, thereby increasing the birth and growth of the labor force. This shows that wage determination is influenced by labor demand and social factors such as marital customs.

Human Development Index Theory

According to Todaro, the quality of a country's Human Resources (HR) determines the character and speed of its socio-economic development. The new growth theory emphasizes the importance of investing in human capital development to increase productivity through education, knowledge, and skills.

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RESEARCH METHODS

Research Location

The location of this research focuses on the Malang Regency area. This study uses a time period from 2014 to 2023

Data and data sources

The data used is a type of secondary data taken from BPS. The existing secondary data is the Number of Population, Labor Force Participation Level, Minimum Wage, Human Development Index and Open Unemployment Rate during the 2014-2023 period.

Data Analysis

Data analysis in this study was carried out using a quantitative analysis method . The analysis tool applied is multiple linear regression, a useful approach to test the model of the influence and relationship of independent variables, more than two variables, on dependent variables. The testing process is carried out partially by examining: Testing the hypothesis of the influence of independent variables consisting of: Number of Population, TPAK, Minimum Wage, HDI and TPT. With the following equation model:

$$Yt = a + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon t$$

Information:
Y = Open Unemployment Rate
X1 = Total Population
X2 = Labor Force Participation Rate
X3 = Upah Minimum
X4 = Human Development Index
a = Constanta
e = Standard error or Perturbrating Variable
β1 β2 β3 = Regression Coefficient

RESULT

Coefficient of Determination Test

The Coefficient of Determination (R2) test is to see if the free variable has an effect on the bound variable. Related to this, conclusions will be drawn by knowing through R Square.

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Table 1 Results of Determination Coefficient

Coefficient of Determination	
R-Squared	0,84

Source : SPSS Output

Based on the table above, a determination coefficient of 0.980 means that the variables of population number, TPAK, human development index, and minimum wage affect the variable of the open unemployment rate (Y) by 84%, while the rest, which is 26%, is influenced by other variables outside the model.

Uji Statistics F

The F test is a statistical analysis used to compare and contrast the effects of several predictor variables on dependent variables in a regression model.

Table 2 Results of Statistical Test F

Simultaneous Test F	
P-value	0,000

Source : SPSS Output

Based on the table above, a p-value (0.000) of less than 0.05 is obtained, then H0 is rejected and H1 is accepted and a value of Fcal 62.159 and Ftable 4.53 is also obtained. Therefore, it can be concluded that there is a significant influence between the variables of population number, TPAK, human development index, and minimum wage on the open unemployment rate (Y) simultaneously or together.

Test t

The T-test is a statistical test performed on each of the coefficients of the predictor variable in the regression model to determine whether the variable x predictor has a significant influence on the dependent variable.

Table 3 T Test Results

Partial Test T	
Variable	P-value
Total Population (x1)	0,009

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TPAK (X2)	0,039
Human Development Index (X3)	0,147
Upah Minimum (X4)	0,011

Source : SPSS output (processed)

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4$$

$$Y = -22{,}061 + 1{,}765 \times 10\text{-}6\ X1 + 0{,}077\ X2 - 2{,}456 \times 10\text{-}7 + 0{,}258\ X4$$

The regression equation can be written as follows:

a. β0 : Open Unemployment Rate = -22,061

If the values of the independent variables (X1,X2,X3, and X4) are zero or constant, then the variable of the open unemployment rate is -22.061,

b. β1 : Total Population = 1,765 x 10-6

If the variable value of the population increases by one unit, then the variable of the open unemployment rate will increase by 1.765 x 10-6 on average. There is a significant influence between the number of population (X1) on the variable of the open unemployment rate (Y) partially, this is shown from the pvalue of 0.009<0.05, then H0 is rejected and H1 is accepted and tcal = 4.139 > ttable = 2.571

c. β2 : TPAK = 0.077

If the value of the TPAK variable increases by one unit, then the variable Open Unemployment Rate will increase by 0.077 on average. There is a significant influence between TPAK (X2) on the variable Open Unemployment Rate (Y) partially, this is shown from the pvalue of 0.039<0.05, then H0 is rejected and H1 is accepted and tcal = 2,784> ttable = 2,571

d. β3 : Upah Minimum = – 2,456 x 10-7

If the value of the Human Development Index variable decreases by one unit, the variable Open Unemployment Rate will decrease by 2.456 x 10-7 on average. There is no significant effect between the minimum wage (X3) and the variable Open Unemployment (Y) partially, this is shown from the pvalue of 0.147>0.05, then H0 is accepted and H1 is rejected and tcal =-1,714 ttable =2,228

e. β4 : HDI = 0.258 If the value of the minimum wage variable increases by one unit, then the variable Open Unemployment Rate will increase by 0.258 on average. There is a significant influence between the human development index (X4) on the variable of the open unemployment rate (Y) partially, this is shown from the pvalue of 0.011<0.05, then H0 is rejected and H1 is accepted and tcal

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= 3,977> ttable = 2,228

DISCUSSION

The Effect of Population on the Open Unemployment Rate in Malang Regency

The results of the partial hypothesis test show that the calculated t-value is 2.228 and the gis value is 0.009, which means that the number of population (X1) has a positive and significant effect on the open unemployment rate (Y). High population growth increases competition for life, encouraging individuals to improve education and skills so as to reduce unemployment. Malang Regency has experienced an increase in population influenced by external factors, as a buffer for Malang City and Batu City, as well as a new economic growth center in East Java. However, employment in the agriculture and tourism sectors is still limited, so unemployment remains high. This finding is in accordance with Malthus's Population Theory which states that population growth increases labor needs and lowers wages. These results are in line with the research of Rangga Pramudjasi et al. (2019) and Trianggono Budi Hartanto, Siti Umajah (2019), which also found that the number of people has a positive and significant effect on the open unemployment rate.

Effect of Labor Force Participation Rate on Open Unemployment Rate

The results of the partial hypothesis test showed a t-value of 2.228 with a significance of 0.039, indicating that the labor force participation rate (X2) had a positive and significant effect on the open unemployment rate (Y). This is due to increased competition and participation in education and skills, which encourages people to get jobs, thus reducing unemployment. This finding is in line with Adam Smith's theory that an increase in population will increase labor force participation, expand the market, and labor needs. These results are also consistent with the research of Amri et al. (2019) and Cinta Marito et al. (2019), which show that TPAK has a positive and significant influence on the open unemployment rate.

The Effect of the Minimum Wage on the Open Unemployment Rate

Partially, the hypothesis test showed a t count of 2.228 and a significant value of 0.147, meaning that the minimum wage (X3) did not have a significant effect on the open unemployment rate (Y) in Malang Regency. This result is different from the initial hypothesis that the minimum wage has an effect on open unemployment. In stable economic conditions and high labor demand, an increase in the minimum wage may not

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affect unemployment, as labor needs continue to increase as production grows. This result is not in accordance with the theory that the increase in the minimum wage reduces unemployment, but is in line with the research of Angga Syahputra, Erfit, and Nurhayani (2019) who concluded that the minimum wage has no effect on open unemployment.

The Effect of the Human Development Index on the Open Unemployment Rate

The results of the hypothesis test show a t count of 2.228 and a sig value of 0.011, which means that the Human Development Index (X4) has a positive and significant effect on the open unemployment rate (Y). This means that the increase in HDI in Malang Regency will be followed by an increase in the unemployment rate. The study found that the higher the quality of an individual, the higher the standard of work he or she wants, including wages and good working conditions. However, many companies in Malang offer low wages, so many graduates choose not to work until they find a suitable job. The increase in HDI in Malang occurs in all dimensions, including longevity, knowledge, and a decent standard of living, in line with the New Growth Theory which states that human capital development increases productivity and reduces unemployment. This finding is consistent with the research of Cinta Marito et al. (2019) which also shows that HDI has a positive and significant effect on the open unemployment rate.

CONCLUSION

The population in Malang Regency has a significant effect on the open unemployment rate from 2014 to 2023, because this area is a buffer between Malang City and Batu City which are developing as centers for trade, services, and tourism. The increase in population is more influenced by external factors. Labor force participation rates also have a significant effect on open unemployment as increased participation spurs tougher competition and encourages increased education and skills. On the other hand, the minimum wage does not have a significant effect on open unemployment because many labor demands are not balanced with wages according to the UMR. The Human Development Index shows a positive influence on open unemployment, thanks to the improvement of post-pandemic social and economic conditions and the government's strategy in socio-economic recovery, which has an impact on improving the quality of health, education, and public expenditure in Malang Regency.

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SUGGESTION

The government is expected to project the rate of population growth and adjust it to economic growth and investment to create job opportunities. In addition, the government needs to map and apply skills that are relevant to the needs of the world of work so that the new workforce is ready to face challenges. It is also important for the government to optimize the positive impact of education on reducing the unemployment rate by ensuring that the education system is aligned with the needs of the job market, so that graduates have the skills that the industry needs.

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