ANALYSIS OF THE EFFECT OF EDUCATION LEVEL, MINIMUM WAGE, AND ECONOMIC GROWTH ON THE OPEN UNEMPLOYMENT RATE IN BANYUWANGI REGENCY

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Abstract

The open unemployment rate is one of the important indicators that reflect the dynamics of a country's economy and labor market. The open unemployment rate is the result of an imbalance between the availability of job opportunities and those seeking work. The purpose of this study was to determine the effect of education level, minimum wage, and economic growth on the open unemployment rate in Banyuwangi Regency. In this study, the method used is a quantitative method using secondary data obtained from the Central Statistics Agency of Banyuwangi Regency for 20 years from 2005-2024. The analytical method used in this study is multiple linear regression analysis with the help of SPSS statistics which aims to determine the effect of independent variables on the dependent variable. Based on the results obtained in this study, it shows that the minimum wage has an effect, the level of education has a positive effect, and economic growth has a negative effect and has an influence on the open unemployment rate.

Keywords: Open Unemployment Rate, Education Level, Minimum Wage, Economic Growth

INTRODUCTION

A country's economic development goes hand in hand with economic growth, population, employment, and human resources. Economic development aims to improve people's welfare by creating and expanding job opportunities so that income can be distributed equitably. The unemployment rate is one of the important indicators reflecting the dynamics of a country's economy and labor market. Open unemployment is a problem that frequently plagues economic activity and is difficult to control, faced by all countries in the world, both developed and developing countries like Indonesia. High open unemployment rates have negative impacts on the economy, individuals, and society (Suhadi Fajar & Setyowati Eni, 2022).

The open unemployment rate is one of the main challenges to sustainable development. The open unemployment rate is the condition of someone who is unemployed or looking for work due to a shortage of jobs compared to the labor force. The open unemployment rate in Banyuwangi Regency has fluctuated over the past five years. In 2020, the unemployment rate was 5.34%, increasing to 5.42% in 2021 due to the Covid-19 pandemic, which reduced economic activity and contributed to the increase in unemployment. The open unemployment rate began to decline to 5.26% in 2022 in line with the recovery of economic activity. It continued to decline by 4.75% in 2023 and decreased significantly in 2024 to 4.03% ((*BPS Kabupaten Banyuwangi*, 2024).

Banyuwangi Regency plays a vital role in supporting the regional economy through its growing leading sectors, such as tourism, agriculture, and plantations (Sofiah et al., 2024). However, this increase in economic activity and production is not always accompanied by a comparable increase in labor absorption. This results in some of the workforce not being fully absorbed optimally, so that the open unemployment rate remains an ongoing problem and causes an increase in unemployment in Banyuwangi Regency (Sambaulu et al., 2022).

One factor influencing the open unemployment rate is education level. Education plays a role in increasing workforce productivity, thereby improving future quality of life (Cahyani & Marhaeni, 2020). Average years of schooling are one measure of a community's formal educational attainment. The higher the average years of schooling in a region, the better the quality of its education and human resources.

Economic growth is a significant factor influencing the unemployment rate. Economic growth is a benchmark for assessing a region's development and changes in economic activity levels from year to year. Economic growth is closely linked to open unemployment; high economic growth in a region will result in a decrease in open unemployment. High economic growth indirectly creates jobs. The available jobs absorb the labor force, thereby reducing the unemployment rate.

Based on the description above, this study aims to analyze the Level of Education, Minimum Wage, and Economic Growth on the Open Unemployment Rate in Banyuwangi Regency.

REVIEW OF LITERATURE

Open Unemployment Rate

Open unemployment is defined as the inability of the workforce to find work that meets their needs. In other words, unemployment refers to a situation or circumstance in

which a person faces a lack of employment opportunities (Suparmono, 2018). According to Sukirno (2023), open unemployment is the percentage of the workforce in the economy, whether actively seeking work or unemployed. The open unemployment rate results from an imbalance between the availability of jobs and those seeking them.

Level of Education

Education level is a factor that drives economic development by improving the quality of the workforce and creating innovation capacity. Average years of schooling are a measure of an individual's formal education. Becker (2025) argues that investment in human resources has a significant impact on increasing labor productivity, driven by education. The goal of education is to acquire knowledge and skills that can be used as preparation for employment.

Minimum Wage

The minimum wage is the amount of money a worker receives for performing a job. Wages are a right held by workers, determined and delivered according to an agreed employment contract or applicable regulations (Annam & Nasir, 2024). The minimum wage affects the number of workers in a country. When a region's minimum wage is high, workers are attracted to jobs because of the high wage offered. If the wage level is lowered, it will result in a decrease in people's incomes and impact purchasing power.

Economic Growth

Economic growth is the process of increasing production in an economy, manifested in the form of national income. Economic growth is one indicator used to measure a country's economic success. A country's economy is said to be growing if the economic activities of its people have a direct impact on increasing the production of goods and/or services. According to Sukirno (Mulyaningsih, 2019), economic growth measures the achievements of an economy's development. If economic growth is not accompanied by greater population growth, open unemployment will increase.

RESEARCH METHOD

This study uses a quantitative approach with secondary time series data obtained from the Central Statistics Agency of East Java Province and the Central Statistics Agency of Banyuwangi Regency. This study was conducted in Banyuwangi Regency over a 20-year period from 2005 to 2024. Three variables were used in this study: the independent variables were education level, minimum wage, and economic growth. The dependent variable was the open unemployment rate. The analysis method used was multiple linear regression with classical assumption tests and hypothesis tests assisted by IBM SPSS Statistics 27.

RESULTS AND DISCUSSION

Classical Assumption Test

Normality Test

Table 1.
Normality Test Result

One-Sample Kolmogorov-Smirnov Test	
	Unstandardized Residual
Asymp. Sig. (2-tailed)[c]	.200[d]

Source: SPSS 27 Output

Based on the results of the normality test, the Asymp. Sig. (2-tailed) value was 0.200 > 0.05. Therefore, it can be concluded that the data used is normally distributed.

Multicollinearity Test

Table 2.
Multicollinearity Test Result

Model Variable	Tolerance	VIF
TP	.140	7.159
UMK	.126	7.917
PE	.769	1.301

Source: SPSS 27 Output

Based on the research results above, it can be seen that the tolerance value for the variables of education level, minimum wage, and economic growth is >0.10, and the VIF value for each variable is <10.00. Therefore, it can be concluded that there are no symptoms of multicollinearity in the regression model.

Heteroscedasticity Test

Table 3.
Heteroscedasticity Test Result

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	8.153	15.524		.525	.607
	TP	-1.036	2.528	-.244	-.410	.687
	UMK	-6.109E-7	.000	-.259	-.414	.684
	PE	-.132	.204	-.165	-.651	.525

Source: SPSS 27 Output

Based on the research results above, it can be seen that the significance value of each variable is >0.05. The significance value for the education level variable is 0.687, the minimum wage variable is 0.684, and economic growth is 0.525. Therefore, it can be concluded that there are no symptoms of heteroscedasticity, meaning the assumptions for the heteroscedasticity test have been met.

Autocorrelation Test

Table 4.
Autocorrelation Test Result

Model Summary[b]	
Model	**Durbin-Watson**
1	**2.055**

Source: SPSS 27 Output

The results of the autocorrelation test above obtained a Durbin-Watson value of 2.055. The dU value was obtained as much as 1.6763 and the 4-dU value was 2.3237. It can be concluded that 1.6763 < 2.055 < 2.3237, there is no autocorrelation symptom because the DW value is between dU and 4-dU.

Multiple Linear Regression

Table 5.
Multiple Linear Regression Result

Coefficients[a]		
		Unstandardized Coefficients
Model		**B**
1	**(Constant)**	**-9.496**
	TP	**2.917**
	UMK	**-2.793E-6**
	PE	**-.363**

Source: SPSS 27 Output

The test results obtained the following regression equation:

$$TPT = -9{,}496 + 2{,}917\,TP - 2{,}793\,UMK - 0{,}363\,PE + \varepsilon$$

The test results obtained the following regression equation:

β_0 = The constant value obtained of -9.496 shows that if the Education Level (X1), Minimum Wage (X2), and Economic Growth (X3) are considered constant, the Open Unemployment Rate (Y) will experience a decrease of 9.496%.

β_1 = The regression coefficient value of the Education Level variable (X1) is 2.917, so the Education Level (X1) has a positive effect, and it can be interpreted that if there is an increase of 1 percent, the Education Level variable will cause an increase in the Open Unemployment Rate (Y) of 2.917%.

β_2 = The regression coefficient value of the Minimum Wage variable (X2), which is -2.793, shows that the Minimum Wage has a negative effect and can be interpreted as meaning that if there is an increase of 1 percent, the Minimum Wage variable will cause a decrease in the Open Unemployment Rate (Y) of 2.793%.

β_3 = The regression coefficient value of the Economic Growth variable (X3), which is -0.363, indicates that Economic Growth has a negative effect and can be interpreted as meaning that if there is an increase of 1 percent, the Economic Growth variable will cause a decrease in the Open Unemployment Rate (Y) of 0.363%.

Hypothesis Test

Coefficient of Determination

Table 6.
Coefficient of Determination Result

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.624[a]	.389	.274	1.35645

Source: SPSS 27 Output

It is known that the Adjusted R Square value is 0.274, which means that all independent variables, namely education level, minimum wage, and economic growth, can explain the dependent variable, namely the open unemployment rate of 27.4%, while 72.6% is influenced by other variables outside this study.

F Test

Table 7.
F Test Result

ANOVA[a]					
Model		df	Mean Square	F	Sig.
1	Regression	3	6.246	3.394	.044[b]
	Residual	16	1.840		
	Total	19			

Source: SPSS 27 Output

The table above shows a calculated F value of 3.394 with a significance value of 0.044. Given the F table value ($\alpha = 0.05$) with a degree of freedom (df1) of 3 and a df2 value of 16, the F table is 3.24. Therefore, the calculated F value of 3.394 is greater than the F table value of 3.239, with a significance value of 0.044 <0.05. It can be concluded that the variables of education level, minimum wage, and economic growth simultaneously influence the open unemployment rate in Banyuwangi Regency.

T Test

Table 8.
T Test Result

Model	t count	t table	Sig.	Prob.
TP	1,466	2,1199	0,162	0,05
UMK	-2,404	2,1199	0,029	0,05
PE	-2,268	2,1199	0,038	0,05

Source: SPSS 27 Output

The t-test above found that the education level variable had a positive but insignificant effect. Meanwhile, the minimum wage and economic growth variables had a negative and significant effect on the open unemployment rate.

The Effect of Education Level on the Open Unemployment Rate

The test results obtained a t-value of 1.466 < 2.1199 and a significance value of 0.162 > 0.05. The education level variable has a positive but insignificant effect on the unemployment rate in Banyuwangi Regency. Therefore, H_0 is accepted and H_1 is rejected.

These results contradict human capital theory, which states that investment in human resources contributes to increased labor productivity driven by education and skills. Increasing educational attainment tends to increase the supply of educated workers. However, this increase is not matched by a corresponding demand for qualified workers. Meanwhile, Banyuwangi Regency's economic structure excels in the agriculture, tourism, plantation, and trade sectors, which tend not to always require a high level of formal education but instead emphasize skills and work experience.

The results of this study support the findings of Fannani et al., (2023) which proves that the level of education has a positive and insignificant effect on the open unemployment rate.

The Effect of Minimum Wage on the Open Unemployment Rate

Based on the results of the study, it shows that the t-value is 2.404 > 2.1199 and the sig. value is 0.029 < 0.05. The minimum wage variable has a negative and significant effect on the open unemployment rate in Banyuwangi Regency. With H_0 rejected and H_1 accepted.

This aligns with the efficient wage theory, which states that higher wages can increase labor productivity. Higher wages encourage increased work motivation, loyalty, and worker well-being. Furthermore, increasing the minimum wage also has the potential to increase people's purchasing power, which in turn drives demand for goods and services and the need for labor. This situation increases economic activity in leading sectors in Banyuwangi Regency, increasing labor demand, thereby increasing labor absorption and reducing the open unemployment rate in Banyuwangi Regency.

This is supported by research by Hendra et al., (2023), which found that wages have a negative and significant effect on the open unemployment rate.

The Effect of Economic Growth on the Open Unemployment Rate

Based on the research results, economic growth has a t-value of 2.268 > 2.1199 and a sig. value of 0.038 < 0.05. The economic growth variable in the year has a significant negative effect on the open unemployment rate in Banyuwangi Regency. Therefore, H0 is accepted and H3 is rejected, which means the third hypothesis is accepted. This economic growth has a significant effect on the open unemployment rate in Banyuwangi Regency. The higher the economic growth in Banyuwangi Regency, the greater the absorption of labor so that the number of unemployed can be suppressed.

In accordance with the neoclassical growth theory proposed by Robert M. Sollow and T.W. Swan, economic growth is influenced by the accumulation of capital, labor, and technological progress. In this case, increased economic growth increases production and investment activity in a region, ultimately driving increased demand for labor.

With increased economic activity, leading sectors in Banyuwangi Regency will expand production capacity, requiring additional labor. This leads to increased labor absorption and a decrease in the open unemployment rate. Furthermore, high economic growth indicates a more stable and developing economy, thus creating more job opportunities for the people of Banyuwangi Regency.

This research is similar to research conducted by Saputra (2025), which found that economic growth has a negative and significant effect on the open unemployment rate.

CONCLUSION

Based on the research results, the education level variable has a positive but insignificant influence on the open unemployment rate in Banyuwangi Regency. The Banyuwangi Regency government needs to improve human resources not only through education but also by providing job training programs as job skills training, especially in sectors that are in line with local economic needs. Furthermore, the minimum wage variable has a negative and significant influence on the open unemployment rate in Banyuwangi Regency. Meanwhile, the economic growth variable has a negative and significant influence. Economic growth must be directed to be more inclusive by encouraging regional leading sectors to absorb more local labor and reduce the open unemployment rate. For future researchers interested in this research, it is recommended to further explore the influences that are in line with the research to be undertaken. Thus, it is hoped that further research can make a more significant contribution to the development of this science.

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