

The Effects of Economic Growth, The Minimum Wage, and the Unemployment Rate on the Number of People Living in Poverty in East Java, 2020–2024

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ABSTRACT

This study aimed to analyze the partial and simultaneous effects of economic growth, minimum wages, and unemployment rates on the number of people living in poverty in East Java Province from 2020 to 2024, as well as to identify the dominant variables influencing poverty levels. This research employed a quantitative approach using secondary data obtained from the Central Statistics Agency of East Java Province. The data consisted of information related to the number of people living in poverty, economic growth, minimum wages, and unemployment rates during the 2020–2024 period. The results of the partial testing (t-test) showed that the economic growth variable, measured by Gross Regional Domestic Product (GRDP), did not have a significant effect on the number of people living in poverty in East Java Province during the study period, with a significance value of 0.508, which was greater than the 0.05 significance level. In contrast, the minimum wage variable (Upah Minimum Provinsi or UMP) and the open unemployment rate variable (Tingkat Pengangguran Terbuka or TPT) had significant effects on poverty levels, with significance values of 0.017 and 0.007, respectively, which were below the 0.05 threshold. Meanwhile, the results of the simultaneous testing (F-test) indicated that economic growth (GRDP), minimum wages (UMP), and open unemployment rates (TPT) collectively had a significant effect on the number of people living in poverty in East Java Province during the 2020–2024 period, with a significance value of 0.029, which was lower than 0.05.

INTRODUCTION

East Java Province is located between 7°12' South Latitude and 8°48' South Latitude, and between 111°0' East Longitude and 114°4' East Longitude (Barokah et al., 2023; Firmansyah et al., 2022; Mutaqin & Ningsih, 2023). As of the end of 2023, East Java Province consisted of 29 regencies and 9 cities. The total area of East Java Province is 48,036.84 km². The regency with the largest area is Banyuwangi Regency, covering approximately 3,592.9 km², while the city with the smallest area is Mojokerto City, with an area of 20.22 km². Geographically, the northern part of East Java borders the Java Sea, the eastern part borders the Bali Strait, the

southern part borders the Indian Ocean, and the western part borders Central Java Province (BPS East Java Province, 2024).

East Java continued to face significant poverty challenges, particularly during the 2020–2024 period. The COVID-19 pandemic slowed economic recovery in the province during this period. According to data from the Central Statistics Agency (Badan Pusat Statistik or BPS), economic growth in East Java contracted by -2.39% in 2020 due to the impact of the pandemic, representing a significant decline compared with previous years, which consistently recorded positive growth. This condition indicates that economic performance has a substantial influence on public welfare (Challoumis, 2024; Coelho et al., 2023; Fang et al., 2022; Jie et al., 2023; Zhang & Dilanchiev, 2022). One important factor affecting welfare is economic growth. According to Kuznets, economic growth refers to the long-term increase in a country's capacity to provide various types of economic goods needed by society. This indicates that a country's ability to produce more goods and improve the quality and diversity of products contributes to increasing public welfare over time. Meanwhile, Sukirno (2011) defines economic growth as a process of economic development characterized by an increase in the production of goods and services within society. Economic growth not only reflects increased production but also contributes to improvements in overall social welfare and prosperity. In other words, economic growth concerns not only the quantity of goods produced but also its impact on improving the quality of life within society (Wau et al., 2022).

According to Iskandar (2013), economic growth refers to a significant increase in national income, including per capita income, within a certain period. This concept demonstrates a country's ability to continuously develop its productive capacity and generate greater quantities of goods and services for its citizens. When a country increases its production of goods and services, income levels among its population may also increase. Therefore, economic growth is reflected not only through increasing national income but also through improvements in average individual income over time (Fang et al., 2022; Luo et al., 2023; Magoutas et al., 2024; Mahtta et al., 2022; Miladinov, 2023; Mohamed et al., 2022).

In addition, minimum wage policies play an important role in influencing community welfare. The East Java Provincial Government establishes annual regency/city minimum wages (Upah Minimum Kabupaten/Kota or UMK). One of the primary objectives of increasing minimum wages is to assist low-income workers in meeting their basic living needs. According to the International Labour Organization (ILO), well-designed minimum wage policies can contribute to poverty reduction, particularly among workers in the formal sector. However, the impact of minimum wage increases may vary across regions, as excessive increases may create challenges for small businesses and potentially reduce employment opportunities. According to End et al. (2021), minimum wage refers to the lowest monthly wage consisting of basic wages and fixed allowances established by the governor as a social protection mechanism. Based on East Java Governor Decree Number 188/656/KPTS/013/2023 concerning Regency/City Minimum Wages in East Java for 2024, the UMK in East Java Province in 2024 ranged from IDR 2,165,244 to IDR 4,725,479. The highest minimum wage applied in Surabaya City, while the East Java Provincial Minimum Wage (Upah Minimum Provinsi or UMP) for 2024 was set at IDR 2,165,244.

The novelty of this study lies in its comprehensive analysis of the effects of economic growth, minimum wages, and unemployment rates on the number of people living in poverty

in East Java using panel data from 38 regencies/cities during the 2020–2024 period. Unlike previous studies that examined these variables separately or within different geographical contexts, this research analyzes the combined effects of these factors within a single analytical model. The use of panel data regression with a fixed-effects method enables control over unobserved heterogeneity among regencies and cities, producing more robust estimates. Furthermore, this study identifies the variable with the most dominant influence on poverty levels in East Java.

Unemployment represents another important factor affecting poverty levels. The COVID-19 pandemic increased unemployment in East Java; however, unemployment levels gradually declined until 2024. According to BPS data (2020), the number of poor people in East Java in September 2020 reached 4.58 million people, equivalent to approximately 11.46% of the population. This represented an increase compared with March 2020, when the number of poor people reached 4.42 million people or 11.09% of the population. This increase demonstrates that the pandemic had a significant impact on poverty conditions and required serious policy responses (Brakefield et al., 2023; Coccia, 2023; Ozili, 2022; Trisi, 2023).

Based on the data described above, the number of people living in poverty in East Java during the 2020–2024 period was influenced by various interconnected factors, including economic growth, minimum wages, and unemployment rates. These factors played important roles in determining community welfare, particularly during crisis conditions such as the COVID-19 pandemic. Therefore, an in-depth analysis is necessary to understand how these three variables affect poverty levels in East Java and to support the formulation of more effective poverty alleviation policies.

Based on the background described above, the research problems addressed in this study are whether economic growth, minimum wages, and unemployment rates partially affect the number of people living in poverty in East Java during the 2020–2024 period; whether economic growth, minimum wages, and unemployment rates simultaneously affect poverty levels; and which variable has the most dominant effect on the number of people living in poverty in East Java during the study period.

In accordance with the research problems, this study aimed to analyze the partial effects of economic growth, minimum wages, and unemployment rates on the number of people living in poverty in East Java during the 2020–2024 period. This study also examined the simultaneous effects of these variables and identified the variable with the most dominant influence on poverty levels in East Java.

Based on the research problems and objectives, the hypotheses proposed in this study were as follows: economic growth, minimum wages, and unemployment rates partially affect the number of people living in poverty in East Java during the 2020–2024 period; economic growth, minimum wages, and unemployment rates simultaneously affect poverty levels; and minimum wages represent the variable with the most dominant influence on the number of people living in poverty in East Java during the 2020–2024 period.

METHOD

This study employed a quantitative research approach using secondary data obtained from the Central Statistics Agency of East Java Province. The population consisted of all data

related to the number of people living in poverty in East Java Province, with economic growth, minimum wages, and unemployment rates as the influencing factors during the 2020–2024 period. The study used a saturated sampling technique (census sampling), in which all members of the population were included as research samples.

The data analysis technique applied in this study was panel data regression. This method was selected because the dataset combined cross-sectional and time-series data, consisting of regency/city observations in East Java Province during the 2020–2024 period. The panel data regression model used in this study was formulated as follows:

$$Y = \alpha + \beta_1 PDRB + \beta_2 UMK + \beta_3 TPT + \epsilon$$

Information:

Y = Amount resident poor district/city Java East year 2020-2024

α = Constant

$\beta_1, \beta_2, \beta_3$ = Coefficient regression

$PDRB$ = Growth economy district/city Java East year 2020-2024

UMK = Wages minimum district/city district/city Java East year 2020-2024

TPT = Level unemployment open district/city Java East year 2020-2024

ϵ = Error term

Test Hypothesis

Hypothesis testing is carried out to determine whether the independent variable has influence to variables dependent Good in a way simultaneous and partially. In this study, hypothesis testing was carried out using the F test (simultaneous), test t (partial), coefficient determination (R^2), as well as analysis variables dominant with a significance level of $\alpha = 0.05$.

RESULTS AND DISCUSSION

Analysis Data Panel

Table 1. Estimation Data Panel

Variable	Coefficient	Std. Error	t- Statistics	Prob.
C	137.2697...	8.3761344...	16.388203...	3.68695...
GRDP_____	-0.00495...	0.0282220...	-0.175450...	0.86096...
Minimum Wage RP_	-1.31707...	2.5642745...	-5.136233...	8.64365...
TPT_____	1.780967...	0.5619006...	3.1695412...	0.00185...
Effects Specification				

Source: *Output E-Views* , processed researchers (2025)

Based on Figure 1, it is known that the UMK and TPT variables are significant at the 5% error level. This can be seen from the UMK probability value. As big as 0.0000 And TPT as big as 0.0019 Which more small from 0.05. Meanwhile, variables GRDP own mark probability 0.8609, Which means variables This is not significant because it is greater than 0.05.

Test Hypothesis

Table 2. Hypothesis Testing

Dependent Variable: POVERTY__JUTA_JIWA_Methode
Panel Least Squares
Date: 04/18/26 Time: 19:25 Sample:
2020 2024
Periods included: 5
Cross-sections included: 38
Total panel (balanced) observations: 190

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	137.2698	8.376134	16.38820	0.0000
GRDP_____	-0.004952	0.028222	-0.175450	0.8610
Minimum Wage RP_	-1.32E- 05	2.56E- 06	-5.136233	0.0000
TPT_____	1.780967	0.561901	3.169541	0.0019
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.993886	Mean dependent var	112.3405	
Adjusted R-squared	0.992245	Elementary School dependent var	69.06178	
SE of regression	6.081897	Akaike info criterion	6.637011	
Sum squared residual	5511.431	Black criterion	7.337685	
Log likelihood	-589.5161	Hannan-Quinn criter.	6.920844	
F-statistic	605.5302	Durbin-Watson stat	2.128720	
Prob(F-statistic)	0.000000			

Source: *Output E-Views* , processed researchers (2025)

1. Test F (Simultaneous)

Based on Figure 4.13, the F-count value obtained is 605.5302 and The probability value of F is 0.000000. At a significance level of 5%, the probability value is more small from 0.05, so that test F significant. With thus, it can be concluded that all independent variables, namely economic growth (GRDP), minimum wage (UMK), and open unemployment rate (TPT), are together influential significant to amount resident poor in East Java.

2. Test T (Partial)

Based on Figure 4.13, it shows that individually not all independent variables have a significant influence on the number of poor people in Java. East. Variables Which significant is Minimum Wage And TPT, whereas GRDP is not significant.

a. The Influence of Economic Growth (GRDP) on the Number of Poor People in East Java

The analysis results show that the GRDP variable has a t-value of -0.175450 with a probability value of 0.8610. At a significance level of 5%, this probability value is greater than 0.05, so the GRDP variable individually does not have a significant effect on the number of poor people in East Java.

b. The Impact of Minimum Wage (UMK) on the Number of Poor People in East Java

The analysis results show that the UMK variable has a t-value of -5.136233 with a probability value of 0.0000. At a 5% significance level, this

probability value is less than 0.05, so the UMK variable individually has a significant effect on the number of poor people in East Java. A negative coefficient value indicates that the higher the minimum wage, the lower the number of poor people.

c. Influence Level Unemployment Open (TPT) to Amount Poor People in East Java

3. Coefficient Determination (R^2)

Coefficient determination or goodness of fit is obtained of 0.993886. This indicates that the GRDP, UMK, and TPT variables are 99.39% effective in explaining variations in the number of poor people in East Java. The remaining 0.61% is explained by variables outside the research model.

4. Dominant Variable

The dominant variable can be identified by looking at the largest t-count value. in mark absolute in between variables free Which significant. Based on the analysis results, the independent variable that has the largest |t-count| value is UMK, which is 5.136233. Thus, it can be concluded that wages minimum (UMK) is variables Which most dominant influence the number of poor people in East Java. The analysis results show that the TPT variable has a t-value of 3.169541 with a probability value of 0.0019. At a significance level of 5%, this probability value is less than 0.05, so the TPT variable individually has a significant effect on the number of poor people in East Java. A positive coefficient value indicates that the higher the open unemployment rate, the higher the number of poor people tends to be.

Discussion Results Study

Panel data analysis in this study aims to determine the influence growth economy, wages minimum, And level open unemployment on the number of poor people in East Java in 2020–2024. Based on the results of panel data processing using the fixed effect method, the following regression equation is obtained:

$$Y = 137,2698 - 0.004952PDRB - 0.0000132UMK + 1,780967TPT + \epsilon$$

Based on the table of estimation results and the regression equation, it can be seen that the constant value is 137.2698. This value shows that if variables growth economy, wages minimum, And open unemployment rate considered constant or worth zero, then the amount poor people in East Java is as big as 137,2698. Mark constant the Also show the existence of factors other in outside model Which can influence amount poor population, but not included in this study. The influence of each independent variable in the model on the number of poor people can be explained as follows.

1. Product Domestic Regional Gross (GRDP)

Variables GRDP has The coefficient is -0.004952. The negative coefficient indicates that economic growth has an inverse relationship with the number of poor people in East Java. This means that every one-unit increase in GRDP will reduce the number of poor people by 0.004952, assuming other variables are held constant. However, based on the partial test results, the probability value obtained is as big as 0.8610 Which more big from 0.05, so that variables GRDP has no effect significant against the amount poor people in Java

East during the study period.

The results of this study indicate that increased economic growth has not been able to significantly reduce the number of people living in poverty. This indicates that the economic growth that has occurred has not been enjoyed equally by all levels of society. Increased economic activity tends to be felt only by certain groups, so its impact on poverty reduction remains relatively low.

Study This in line with study Hafizrianda (2024) stated that economic growth is not always able to reduce poverty if the distribution of income and economic opportunities is not equal. High economic growth does not necessarily have a direct impact on the poor if it is not accompanied by equality development, improvement quality source human resources, and the creation of adequate job opportunities.

Results study This Also supported by study Vomiting *et al* . (2023) explained that regional economic growth, as reflected in GRDP, is expected to reduce poverty levels, but in reality, it has not been able to optimally realize this hope. This condition can occur because economic growth is not balanced by equal employment opportunities and an increase in overall community welfare. Research by Yasin *et al* . (2024) states that economic growth essentially has a negative relationship with poverty, in where improvement growth economy can encourage decline amount resident poor. Will but, influence is greatly influenced by quality growth economics, distribution income, as well as development of sectors directly related to poor communities.

2. Wages Minimum Regency/City (UMK)

Variables wages minimum district/city own coefficient of -0.0000132 . The coefficient value with a negative sign indicates that UMK has connection opposite direction with amount resident poor. This means that every increase in the minimum wage by one unit will reduce the number of poor people by -0.0000132 , assuming that other variables are held constant. However thus, based on results test partial obtained mark the probability is greater than the significance level of 0.05 so that the UMK variable does not have a significant effect on the number of poor people during the research period.

These results indicate that increasing the minimum wage has not yet significantly reduced the number of poor people. While increasing the minimum wage can indeed increase income, worker, especially on sector formal, but benefit the not felt equally by all poor people. Some poor people still work in the informal sector which does not fully comply with the policy. wages minimum, so that increase Minimum Wage Not yet capable reduce poverty rates significantly.

Study This in line with study Hanifah (2021), which states that the minimum wage has a negative impact on poverty. Increasing the minimum wage can improve workers' welfare and help people meet their living needs so that the level of poverty is low. poverty tend decrease. Results study This Also supported by Ghinastri and Syafitri (2024) who explained that the UMK policy aims increase welfare worker and avoid society out of the poverty trap. The

study shows that the minimum wage (UMK) negatively impacts poverty in West Java Province. Increasing the UMK can increase people's purchasing power and help meet basic household needs.

Research by Marpaung and Suharianto (2026) explains that increasing the minimum wage can increase the income of low-wage workers, thereby improving people's purchasing power. This can help people meet basic needs such as food, education, and healthcare, potentially reducing poverty levels. However, several studies have shown different results. Ayuningtyas, Alhakim, and Latif (2024) found that the minimum wage (UMK) had a positive and significant effect on poverty in Central Java. This condition can occur if the increase in the UMK is not accompanied by an increase in income. chance Work so that company do efficiency workforce which has an impact on increasing unemployment and poverty.

The differences in the research results show that the influence of UMK on poverty is greatly influenced by regional economic conditions, structure market power work, and ability company in adjust policies wages. In study This, connection negative between Minimum Wage and poverty shows that increasing the minimum wage tends to be able to reduce the number of poor people, although the effect is not yet statistically significant.

3. Level Unemployment Open (TPT)

The open unemployment rate variable has a coefficient of 1.780967. A positive coefficient value indicates that the open unemployment rate (TPT) has a direct relationship with the number of poor people. This means that every increase in the unemployment rate (TPT) level unemployment open as big as One unit will increasing the number of poor people by 1.780967, assuming other variables are held constant. Based on the partial test results, the probability value of the TPT is 0.0019, which is less than 0.05, so the TPT has a positive and significant effect on the number of poor people in East Java.

Results This shows that an increase in open unemployment can increase the number of poor people. Unemployed people tend not to have a steady income so that they are unable to meet their needs. need base, like food, education, health, And residence become the more limited. Condition This can lower home welfare stairs and increase risk of entering in category poor. This result in line with study Primary *et al.* (2025) Which state that the Open Unemployment Rate has a positive and significant effect on the number of resident poor. The height TPT can become Wrong One factor The main factor driving the increase in poverty is the limited employment opportunities that make it difficult for people to obtain adequate income.

Results This research is also supported by Handani And Suharianto (2025) explains that unemployment can reduce people's income. Decline income the impact on low welfare levels and ultimately increase poverty rates. Qomarina *et al.* (2025) also explain that unemployed individuals generally do not receive a steady income, thus decreasing purchasing power and increasing the chance of being trapped in poverty.

Based on explanation said, the increase TPT in Java East needs attention because unemployment not only results in the loss of income, but Also can lower quality life Community. Efforts to expand employment opportunities, improve workforce skills, and strengthen the productive sector are crucial to provide the community with broader employment opportunities and thus reduce the number of poor people.

CONCLUSION

Based on the research findings regarding the effects of economic growth, minimum wages, and unemployment rates on the number of people living in poverty in East Java Province during the 2020–2024 period, several conclusions can be drawn. First, the economic growth variable, measured by Gross Regional Domestic Product (GRDP), did not have a significant partial effect on the number of people living in poverty, as indicated by the significance value of 0.861, which was greater than 0.05. However, the negative regression coefficient indicated that increased economic growth tended to be associated with a decrease in the number of people living in poverty, although this relationship was not statistically significant. In contrast, the minimum wage (Upah Minimum Provinsi or UMP) and open unemployment rate (Tingkat Pengangguran Terbuka or TPT) variables had significant partial effects on poverty levels, with significance values of 0.000 and 0.002, respectively, which were below the 0.05 significance threshold. Second, economic growth (GRDP), minimum wages (UMP), and open unemployment rates (TPT) simultaneously had a significant effect on the number of people living in poverty, as indicated by the F-statistic probability value of 0.000, which was lower than 0.05. This finding demonstrated that, collectively, the three independent variables explained variations in poverty levels, although not all variables showed significant effects individually. Third, based on the Beta coefficient analysis, the open unemployment rate (TPT) had the most dominant effect on the number of people living in poverty, with a Beta coefficient of 0.230, followed by UMP (0.203) and GRDP (−0.050). This result indicated that changes in unemployment levels contributed a relatively greater influence in explaining variations in poverty levels compared with the other independent variables.

Future research is recommended to conduct longitudinal studies examining the long-term effects of economic growth, minimum wages, and unemployment rates on poverty beyond the post-pandemic period. Researchers may also consider incorporating additional variables, such as inflation, education levels, and infrastructure development, to provide a more comprehensive understanding of poverty determinants. Comparative studies among provinces in Indonesia are also recommended to identify regional variations in poverty dynamics. Further studies examining the mediating role of employment quality and income distribution in the relationship between economic growth and poverty would contribute to the existing literature. In addition, research evaluating the effectiveness of specific poverty alleviation programs in East Java could provide practical insights for policymakers. Finally, future studies examining the differential effects of economic growth, minimum wages, and unemployment rates on various dimensions of poverty, including poverty depth and severity, would provide a more nuanced understanding of poverty dynamics.

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