

Human Development Index, Minimum Wage, Labor Force Participation Rate and Gross Regional Domestic Product on the Open Unemployment Rate in Banten Province

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ABSTRACT

This study aims to analyze how much factors affect the open unemployment rate in Banten Province. The analysis method used is panel data regression analysis, which combines time series data and cross-section data. The data used in this finding is secondary data obtained from BPS Banten Province during the period 2019 to 2023. The variables collected include human development index, minimum wage, employment and gross regional domestic product. Based on the panel data regression results, the best model obtained is CEM. The findings indicate that panel data regression analysis shows a significant effect of HDI, minimum wage, labor force participation rate, and GRDP on the open unemployment rate in Banten Province during the 2019-2023 period. The probability value below 0.05 corroborates this finding. An increase in minimum wage is positively correlated with an increase in open unemployment, while an increase in HDI, labor force participation rate, and GRDP are negatively correlated with open unemployment.

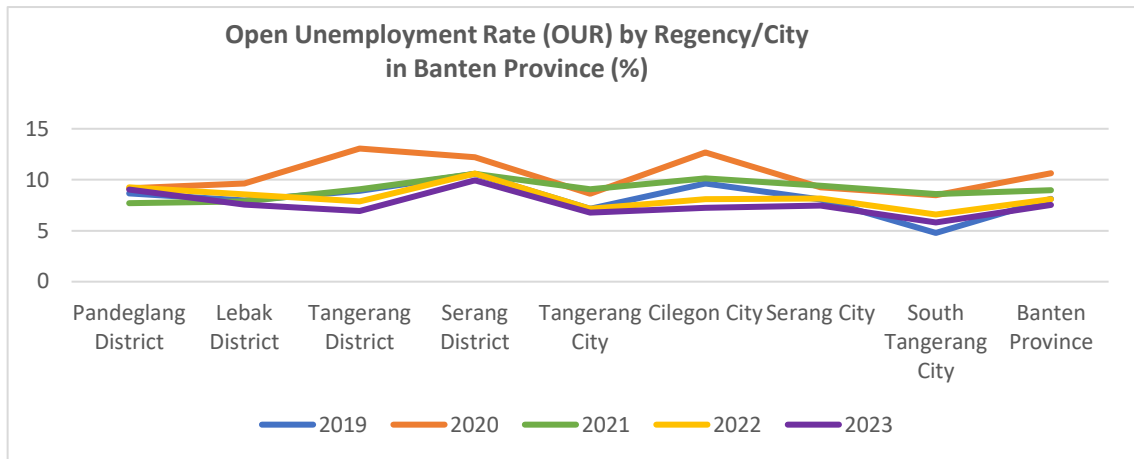
INTRODUCTION

Economic development is defined as the stage of improving people's living standards by increasing real income per capita in a sustainable manner (Subagiarta, 2012: 14). Economic development aims to improve people's welfare by creating more job opportunities and ensuring a fairer distribution of income. Apart from being measured through Gross Domestic Product (GDP), economic development is also assessed from other aspects, such as the quality of education, technological advances, health improvements, infrastructure improvements, and income equality (Faktor et al., 2018). Economic development is not solely about economic growth. Various non-economic aspects such as education, health, infrastructure, and social justice also determine the success of a country's development. Inequality in economic development can trigger various problems for the country concerned. In developing countries, the most common problems are poverty and unemployment.

Unemployment is a condition that exists in all developing countries, such as Indonesia. According to Mankiw, unemployment is a condition when individuals want to get a job in the labor market but are unsuccessful. From an economic and social point of view, unemployment can cause various problems, such as decreased productivity, decreased purchasing power, reduced government revenue from taxes, increased crime rates, and decreased health quality. In addition, unemployment can also affect economic and political stability in a country (Anggraini et al., 2021). The result of this situation is that more and more workers cannot find work. Thus, they do not perform any work activity for a considerable period of time. Therefore, they are really not working full-time and are referred to as open unemployment.

According to (Franita (2016) in (Ii & Pustaka, 2016), open unemployment is a state when total employment is not proportional to the total available labor. Open unemployment in this country is still a relevant issue and has been a long discussion since the fall of the New Order, where Indonesia is considered to have experienced significant disruptions in development in its economic sector. This means that the overall economic state of society has not yet achieved a balanced distribution of income due to high levels of unemployment. One of the provinces in Indonesia according to BPS 2023 with the highest unemployment rate is Banten Province. According to BPS data in 2023, although Banten is known to have a rapidly growing industrial sector, the open unemployment rate is still high in the province. The growing industrial sector, including the manufacturing and service industries, should be able to absorb maximum labor. However, the high unemployment rate indicates a mismatch between current conditions and labor absorption.

The open unemployment rate in Banten Province is a complex issue. Various factors are interrelated and influence this problem. The impact is not only felt by individuals who experience unemployment, but also has broad implications for society and the regional economy. Open unemployment that is not resolved properly can trigger various social problems and widen the socio-economic gap. The following is data on open unemployment in Banten province for the last 5 years:

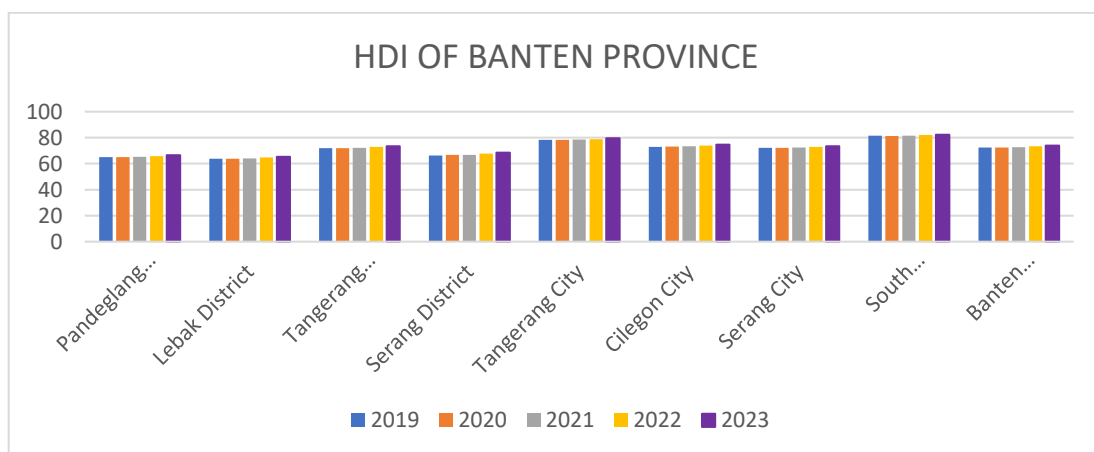


Source: BPS Processed, 2024

Figure 1. Open Unemployment Rate by Regency/City in Banten Province

During the period 2019 to 2023, open unemployment in Banten Province fluctuated. Tangerang City has the highest percentage of unemployment rate at 13.06 percent and according to BPS data the highest city OUR in Banten Province in 2020 was 10.64 percent. One of the causes is Covid 19, while the lowest is in 2023 at 7.52 percent. In 2023 the district or city with the highest OUR is Serang city with 9.94 percent, and the lowest is Tangerang Selatan city at 5.81 percent. Social insecurity and social and economic inequality can occur if this open unemployment problem is not addressed immediately.

One important component in reducing open unemployment is the HDI. Basic quality of life, which consists of several components, is the benchmark in calculating HDI. A good quality of life can improve a person's ability to contribute to society (Unemployment & Province, 2019). HDI aims to measure development achievements by looking at people's access to income, health, and the quality of education (Qamariyah et al., 2019).



Source: BPS Processed, 2024

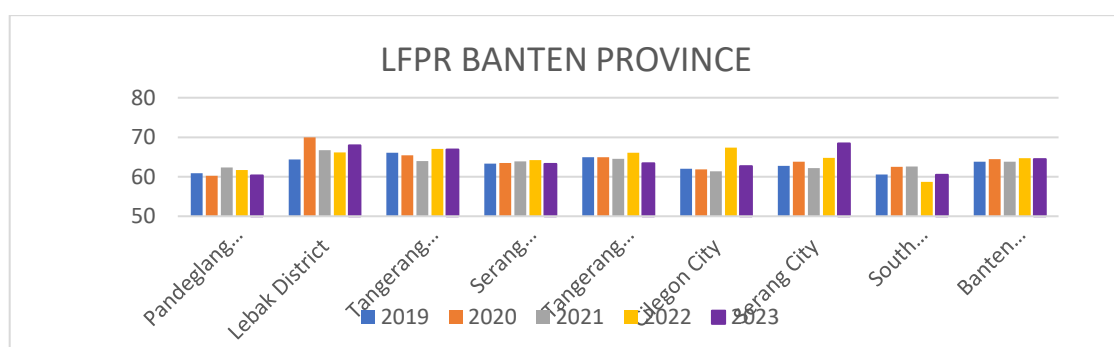
Figure 2. Shows the changes in Banten's HDI from 2019 to 2023

The HDI of Banten Province continues to increase from 2019 to 2023, as shown in Table 1.2. The city of South Tangerang has the first highest average HDI value, the city of Serang is in second place in Banten Province while the city of

Pandeglang is in last place with the lowest HDI of 66.42 in 2023 in Banten Province. The quality of human development in Banten Province is relatively good. However, the unemployment rate in this province during the period 2019 to 2023 was recorded quite high. Even in 2023, Banten ranked first as the province with the highest unemployment rate in Indonesia.

Furthermore, the determination of provincial minimum wage (PMW) is also a factor that needs to be considered in reducing open unemployment. Classical economic theory, as stated by Mankiw, states that a low minimum wage tends to give encouragement to companies to hire more workers, thus reducing unemployment. The correlation between the level of PMW and the unemployment rate indicates that the higher the wage set by the government, the greater the potential for a decrease in the number of workers absorbed by the market (Qamariyah et al., 2022). Therefore, higher wages will increase production costs. As a result, companies reduce their workforce to improve efficiency, leading to an increase in unemployment. According to BPS, the PMW level of Banten Province 2019-2023 increased, but not too high due to the important position of wages for workers and companies. Cilegon City has a minimum wage of RP 4,657,223 in 2023, and Pandeglang has a minimum wage of RP 2,980,350.

The Labor Force Participation Rate (LFPR) is one of the economic indicators that affect the open unemployment rate. According to Hayati (2019), one of the factors that influence open unemployment is labor. A significant increase in the LFPR indicates an increase in public interest in participating in economic activities. This increase, if accompanied by the expansion of employment opportunities, has the potential to reduce the unemployment rate. Conversely, if it is not accompanied by the creation of sufficient employment opportunities, an increase in LFPR can actually worsen the unemployment problem. As a result, unemployment increases along with the size of the labor force (Ekonomi et al., 2013). The following Figure 3. below shows the Labor Force Participation Rate of BANTEN province from 2019 to 2023:



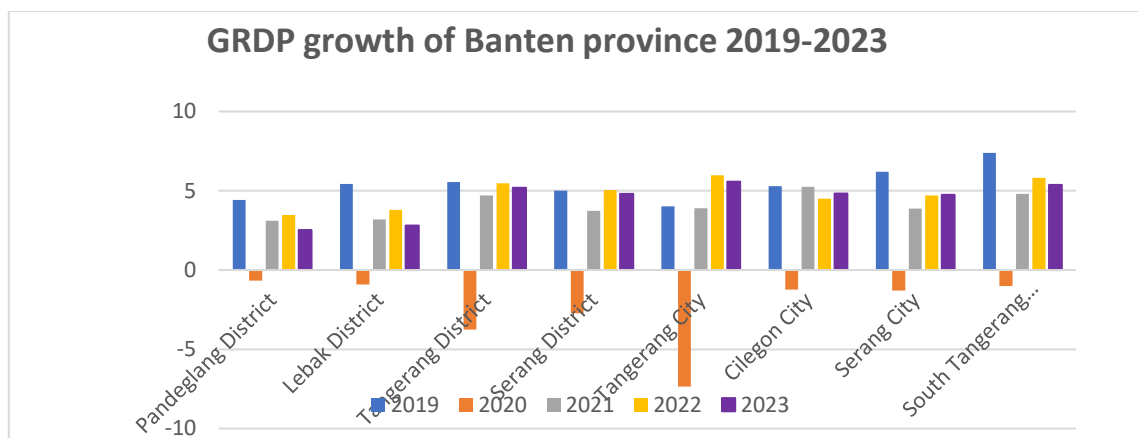
Source: BPS Processed, 2024

Figure 3. The Labor Force Participation Rate of BANTEN Province

During the last 5 years, the level of Banten Province's labor absorption has fluctuated during the 2019-2023 period. The highest LFPR in 2022 was located in the city of Cilegon at 67.39 percent and the lowest was the city of South

Tangerang at 58.67 percent. Then it decreased in 2023, which was 64.44 percent. Cilegon city experienced a drastic decline in 2023 at 62.7 percent.

The next factor that is an indicator of the welfare of the people of a region is the growth of GRDP. The added value generated by the many economic activities in a region can be measured through GRDP (Silaban et al., 2024). An increase in GRDP is a form of economic expansion in a region. This expansion, implicitly, requires an increase in the number of workers to support increased production. The more goods and services sold, the more demand for workers. The value added of gross domestic product at constant prices is a reliable representation of economic growth between years. The dynamics of a country's economic growth are influenced by many determinants, including government policies, global market conditions, and technological developments. The following is a figure 4. of the GRDP of Banten Province 2019-2023:



Source: BPS Processed, 2024

Figure 4. GRDP of Banten Province 2019-2023

We can see that for the lowest GRDP in Banten districts and cities, it occurred in 2020 at -3.39 due to the covid 19 hit which disrupted the rate of economic growth and after 2020 it began to increase. in 2022 the GRDP growth has increased by 5.03 and fell back in 2023 by 4.81. Based on the above background, the purpose of conducting this study is to determine the effect of the variables of human development index, minimum wage, labor force participation and gross regional domestic product on open unemployment in Banten province 2019-2021.

LITERATURE REVIEW

Open Unemployment Rate

According to Mankiw, unemployment arises when the market demand for labor is lower than the total supply. This condition reflects an imbalance in the labor market, where there are more job seekers than vacancies (Setiawan et al., 2023). According to the Classical theory, open unemployment occurs because the wage set in the labor market is too high, so companies cannot hire as many workers as possible. In this theory, wage adjustment will reduce unemployment.

Unemployment is a macroeconomic issue that affects human survival. Bureaucrats often talk about unemployment when talking about policies. They

often conduct research to see if the policies they propose can provide adequate employment (Mankiw, 2012) which in (Ardian et al., 2022). According to BPS, unemployment refers to individuals who are included in the labor force but do not have a job and are trying to get a job or start a new business (Brebes Regency, 2023). The limited duration of employment is the main cause of unemployment, both full and partial. In addition, a decline in economic activity, slow industrial growth, or rapid technological development can also result in high open unemployment.

Human Development Index

The NDP states that the HDI is an effective indicator to measure the quality of human life, covering aspects of health and physical well-being. The HDI, which consists of components of life expectancy, education, and per capita income, is used to measure a country's progress in improving the quality of life of its population (Scientific & Islamic, 2020). Research by Saputra (2011) shows that an increase in HDI is positively correlated with an increase in individual productivity, making it an important benchmark in human development. Therefore, an increase in the HDI level will have an impact on increasing productivity and quality of work, which in turn will lead to a decrease in unemployment.

HDI is a measure of human development outcomes that is based on many important elements of quality of life (Helvira & Rizki, 2020). HDI is based on a three-dimensional approach: public health, education, and purchasing power. Human development relies on four main pillars. First, sustainability of development ensures that current progress is not at the expense of future generations. Second, productivity drives economic growth and improved living standards. Third, equity, both financial and non-financial, is crucial in supporting development initiatives. Finally, community empowerment gives people the ability to make decisions and actively participate in development (Kerja et al., 2022). Research (Soeharjoto and Oktavia, 2021) HDI has a negative effect on unemployment in Indonesia.

HDI, according to findings conducted by (Qamariyah et al., 2022), increases open unemployment, and another study (Nurcholis, 2014) also found that the index increases the unemployment rate.

Province Minimum Wage

The minimum wage acts as a source of income. If this income decreases or remains unchanged, then individual wealth will also decrease or remain fixed. This condition will have an impact on the poverty line. The UMP policy was created to provide a deterrent to employers regarding the provision of unfair wages to new employees (Kerja et al., 2022). Wages are a form of compensation that individuals receive as a result of the work they do completed. This reward is given to a work unit in the form of money paid to the party concerned (Mankiw, 2006).

An increase in wages tends to reduce labor demand, which in turn triggers an increase in unemployment (Alghofari, 2010). The relationship between wages and labor absorption is inversely proportional. When wages decline, total labor

absorption tends to increase. Several findings support this finding. Nurcholis (2014), Trimurti, and Kokulasari (2014) suggest that the minimum wage has a negative impact on the unemployment rate. In addition, Aisyaturridho, Tanjung Ahmad, and Hawariyuni's (2021) study in the 2017-2020 period in North Sumatra also found a positive and significant correlation between wages and the unemployment rate.

Labor Force Participation Rate

According to Sukirno (2004), the labor force refers to the total number of workers or laborers in an economy at a certain period, which is divided into two categories: individuals who are working and those who are unemployed but are actively looking for work. A person is categorized as a worker if they have carried out productive activities for financial reward for at least one hour in the past week. This activity also includes workers who do not receive wages but provide assistance in a business or economic activity (BPS, 2021). Workers who are willing and able to work and try to find work in the last four weeks are considered unemployed. (Scientific & Islamic, 2020). Labor absorption indicates the capacity of a workplace to recruit labor or the number of residents engaged in work. (Ii & Pustaka, 2021). Meanwhile, the employment rate is the ratio between the number of employed workers and the total labor force. Using panel data, Lumi et al. (2021) proved that an increase in the labor force contributed to an increase in the unemployment rate in several North Sulawesi cities. On the other hand, Putri et al. (2017) applied multiple linear regression to analyze the relationship of economic growth and total labor force to unemployment in Batu City. Their research concluded that the labor force has a positive impact on unemployment in Batu City. On the other hand, in their research, Anggoro and Soesatyo (2015) analyzed the relationship between economic growth and increase in labor force to unemployment rate in Surabaya City using multiple linear regression approach. The results showed that an increase in the labor force in the city did not have a significant impact on the unemployment rate.

Gross Regional Domestic Product

GRDP is a total amount or value that shows the level of economic activity and community welfare in a region (Romhadhoni et al., 2018). GRDP, according to Sukirno (2016), BPS South Sumatra (2007), and John M. Culbertson (1957), is generally understood as a measure of the value of the total production of goods and services produced by a region or country within a certain period, which includes the added value of all economic sectors or businesses. According to some researchers, the growth rate of GRDP has a negative impact on the open unemployment rate in Maluku (Ekonomika et al., 2019).

METHODOLOGY

The research methodology used is quantitative and uses secondary data in the form of panel data for the 2019-2023 period. Secondary information in the form of demographic data of Banten residents used in this study is sourced from the official report of BPS Banten Province published in 2023. Open unemployment rate, HDI, minimum wage, and GRDP of Banten Province from

2019 to 2023 are all data collected. Panel data regression analysis is the technique used in this finding.

The observation period in this finding is 5 years, from 2019 to 2023. The data used is panel data including time series and cross-sectional components. Cross-sectional data includes 8 districts/cities. The total data used in this finding is 40, the result of 8 districts/municipalities multiplied by 5 years.

$$OUR = \beta_0 + \beta_1 HDI + \beta_2 PMW + \beta_3 LPFR + \beta_4 GRDP + e$$

Description:

OUR : Open Unemployment Rate

HDI : Human Development Index

PMW : Provincial Minimum Wage

LPFR : Labor Force Participation Rate

GRDP : Gross regional domestic product

β_0 : intercept or constant

$\beta_1 \beta_2 \beta_3 \beta_4$: Regression Coefficient of Independent Variable

e : error term

RESEARCH RESULT

Model Selection Results

1. Chow Test

The Chow test is an effective tool to compare the performance of panel data regression models with FEM and CEM. This test compares CEM with FEM (Widarjono, 2009). The hypotheses formed in the Chow Test are:

H0: CEM is better than FEM

Ha: FEM is better than CEM

Based on the Chow test, the hypothesis acceptance decision is determined by the Chi-square probability value for the cross-section. If this value exceeds 0.05, then H0 is accepted. However, if the probability value is <0.05, then H0 is rejected.

Table 1. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.114061	(7,28)	0.3820
Cross-section Chi-square	9.827978	7	0.1985

Source: Eviews 12 Data Processed, 2024

The table indicates that the p value is 0.1986. Based on the Chow test, the CEM proved to be the best fit. This is because the probability value (p-value) exceeds the significance level ($\alpha = 0.05$).

2. Husman Test

Model selection in the Hausman test is done by comparing FEM and REM. The regression results of the Hausman test are presented:

H0: Random Effects Model

H1: Fixed Effects Model

Table 2. Husman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.409978	4	0.1157

Source: Eviews 12 Data Processed, 2024

The analysis results indicate that the probability value ($p = 0.1157$) exceeds the specified significance level ($\alpha = 0.05$). The Hausman test results show that the REM model is superior, so the Lagrange multiplier test is still carried out.

3. Langrange Multiplier Test

Furthermore, Langrange multiplier test to classify the best model

Table 3. Langrange Multiplier Test

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	2.899287 (0.0886)	0.641632 (0.4231)	3.540920 (0.0599)
Honda	-1.702729 (0.9557)	0.801020 (0.2116)	-0.637605 (0.7381)
King-Wu	-1.702729 (0.9557)	0.801020 (0.2116)	-0.387792 (0.6509)
Standardized Honda	-1.097607 (0.8638)	1.615917 (0.0531)	-3.098350 (0.9990)
Standardized King-Wu	-1.097607 (0.8638)	1.615917 (0.0531)	-2.721182 (0.9967)
Gourieroux, et al.	--	--	0.641632 (0.3929)

Source: Eviews 12 Data Processed, 2024

According to the table, the p value of $0.0886 > \alpha (0.05)$. Therefore, the Langrange test indicates that the CEM model is the best model. In addition, the results of the Chow, Husman, and LM tests support the idea that the CEM is the most suitable model for these findings.

Classical Assumption Test Results

The model used is CEM, so classical assumption testing is required. Multicollinearity and heteroscedasticity are examples of classic assumption tests (Basuki & Yuliadi, 2014: 183; Napitupulu et al., 2021: 120).

1. Multicollinearity Test

Table 4. Multicollinearity Test

	X1	X2	X3	X4
X1	1.000000	0.712263	-0.218582	0.138607
X2	0.712263	1.000000	-0.039236	0.087211
X3	-0.218582	-0.039236	1.000000	-0.104045
X4	0.138607	0.087211	-0.104045	1.000000

Source: Eviews 12 Data Processed, 2024

Correlation analysis showed a strong relationship between variables X1 and X2 ($r = 0.712263$). The relationships between X1 and X3 and X1 and X4 tend to be weak, with correlation values of -0.218582 and 0.138607 respectively. The variables X2 and X3 are almost uncorrelated ($r = -0.039236$). In addition, the correlation between X3 and X4 reaches -0.104045 . The data shows that the multicollinearity test meets the requirements and there is no problem (Napitupulu et al., 2021: 141).

2. Heterosdacity Test

Table 5. Heterosdacity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.319602	3.059904	-0.104448	0.9174
X1	0.020977	0.023819	0.880666	0.3845
X2	1.27E-07	2.05E-07	0.619510	0.5396
X3	-0.010476	0.038759	-0.270280	0.7885
X4	-0.054713	0.030127	-1.816077	0.0779

Source: Eviews 12 Data Processed, 2024

Heteroscedasticity analysis of HDI, minimum wage, labor absorption rate, and GRDP variables related to open unemployment in Banten Province shows that the variance of the regression model residuals is homogeneous. This conclusion is based on the probability value > 0.05 .

Hypothesis Test Results

1. Results of t test

Table 6. T Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	31.0239	5.677327	5.464537	0.0000
TPT	-0.263233	0.044194	-5.956277	0.0000
UMP	1.82E-06	3.80E-07	4.781406	0.0000
TPAK	-0.148040	0.071913	-2.058603	0.0470
PDRB	-0.250022	0.055897	-4.472901	0.0001
R-squared	0.633794			
Adjusted R-squared	0.591941			
S.E. of regression	1.091874			
Sum squared resid	41.72664			
Log likelihood	-57.60275			
F-statistic	15.14363			
Prob(F-statistic)	0.000000			

Source: Eviews 12 Data Processed, 2024

The following is a partial explanation of how the independent variable affects the dependent variable:

- a) In the HDI variable (X1), the t-test results provide an indication of the calculated t value of 5.956277 > 2.024394 from the t table value, with a significance value of 0.0000 < 0.05. This indicates that H0 is rejected and Ha is accepted, so that the HDI variable affects the open unemployment rate in Banten Province.
- b) Based on the t test, the PMW variable (X2) has a significant effect on the open unemployment rate in Banten Province. This is evidenced by the calculated t value (4.781406 > 2.024394) of the t table at a significance level of 0.05. Thus, H0 is rejected and Ha is accepted.
- c) The t test results indicate that the LFPR variable (X3) has a significant effect on the dependent variable. The calculated t value (2.058603 > 2.024394) of the t table value at the 5% significance level (p = 0.04700). As a result, H0 is rejected and Ha is accepted, indicating that the LFPR variable affects open unemployment in Banten Province.
- d) The t-test results indicate that the GRDP variable has a significant effect on the open unemployment rate in Banten Province. The calculated t value (4.47002901 > 2.024394) is more than the t table at the 5% significance level. Thus, H0 is rejected, and Ha is accepted. This indicates that an increase in GRDP in Banten Province has an impact on decreasing the unemployment rate.

2. F Test

The calculation indicates that the calculated F value exceeds the F table value. The calculated F value is recorded as 15.14363 while the table F value is 2.641465. In addition, the significance value of 0.000000 is less than 0.05. The rejection of the null hypothesis (H0) indicates that there is a causal relationship between the HDI, PMW, LFPR, and GRDP variables and the open unemployment rate in Banten Province. Thus, it can be concluded that these variables play an important role in explaining fluctuations in the unemployment rate in the province.

3. Test the Coefficient of Determination (R)

The regression model developed in this finding shows that HDI, PMW, LFPR, and GRDP contribute 59.19% in explaining the open unemployment rate in Banten Province. In other words, changes in the four variables have a significant effect on the revolution in the unemployment rate. The remaining 40.81% is influenced by other variables that are not included in these findings.

$$\text{OUR} = 31.02 - 0.27 \text{ HDI} + 1.81 \text{ PMW} - 0.15 \text{ LFPR} - 0.25 \text{ GRDP}$$

The constant value of 31.02 indicates that in the presence of HDI (X1), PMW (X2), LFPR (X3), and GRDP (X4) variables, the value of variable Y will increase by 31.02. The coefficient for the HDI variable (X1) is -0.27, which means that if all other variables remain constant, a one percent decrease in X1 will result in a decrease in variable Y by -0.27. Conversely, if the value of other variables remains constant and HDI (X1) increases, then the value of OUR (Y) will also increase by 0.27. The coefficient for the PMW variable (X2) is 1.81. This means that if other variables remain constant and X2 increases by one rupiah, then OUR (Y) will decrease by 1.81. Conversely, if X2 decreases by one rupiah while other variables remain constant, OUR will increase by 1.81. For the LFPR variable (X3), the coefficient is -0.15. If other variables remain constant and X3 decreases by one percent, then OUR (Y) will decrease by -0.15. Conversely, if X3 increases by one percent while other variables remain constant, BD will increase by 0.15. Finally, for the GRDP variable (X4), the coefficient is -0.25. If other variables remain constant and X4 decreases by one percent, the Y variable will decrease by -0.25. Conversely, if X4 increases by one percent while other variables remain constant, then variable Y will increase by 0.25.

DISCUSSION

Effect of HDI on Open Unemployment in Banten Province

Data analysis showed a negative and significant effect of HDI on the open unemployment rate in Banten Province. The coefficient obtained is -0.263233 with a significance level of 0.0000 < 0.05. This indicates that an increase in HDI has a positive impact on decreasing the unemployment rate.

Research results (Baihawafi & Sebayang, 2023) indicated that the increase in HDI in West Java was followed by an increase in unemployment from 2018 to 2021. One component that affects the quality of the workforce is education. Low-educated workers generally experience difficulties in entering the workforce. Conversely, a person with a higher level of education usually has better

qualifications, high creativity, and is more easily accepted in various employment sectors. Therefore, education, as one of the HDI indicators, affects the unemployment rate, where the low education level of the workforce causes difficulties in getting a job and results in an increase in total unemployment (Dan et al., 2020).

The Effect of Minimum Wage on Open Unemployment in Banten Province

The statistical test results indicate that there is a significant positive influence between the minimum wage at the Banten district/city level and employment. The regression coefficient of 1.82E-06 with a significance value of 0.0000 reinforces this finding. This finding is in line with the wage rigidity theory proposed by Mankiw (2007), where wage inflexibility can lead to a disproportion between labor supply and demand. High wages affect the cost of production, which encourages firms to make efficiency through labor reduction, resulting in increased unemployment. However, an increase in wages also increases labor supply, which results in a decrease in labor demand.

As a result of the phenomenon of high economic growth and the government's setting of a high ump, companies relocate to save production costs. As a result, there is a surplus of labor or unemployment. Research conducted by (Helvira & Rizki, 2020) in West Kalimantan also showed similar results. High wages do not always increase labor demand, because not all companies can pay according to the wage level set.

Effect of Labor Force Participation Rate on Open Unemployment in Banten Province

The labor force participation rate has a negative and significant impact on open unemployment in Banten province, with a coefficient of -0.148040 and a significant value of 0.0470 (less than 0.05). This indicates that when labor force participation increases, unrecorded unemployment tends to decrease. Conversely, when labor force participation is low, unrecorded unemployment tends to increase. This finding is in line with the results of research conducted by (Vira et al., 2023) in East Java province. In other words, an increase in labor force participation in the labor market actually contributes to an increase in the number of unemployed (Aziz et al., 2020).

The Effect of GRDP on Open Unemployment in Banten Province

Empirical analysis reveals a significant negative effect of GDP on the open unemployment rate in Banten. The regression coefficient of -0.250022 with a very high significance level indicates that the decline in unemployment goes hand in hand with GDP growth. Conversely, economic contraction tends to increase the unemployment rate. This finding is consistent with related literature that links economic growth with employment dynamics. In classical growth theory, it is explained that the low output per capita and the richness of a region's natural resources increase investment returns and entrepreneurs' profits, which then encourage the growth of new investment. However, if economic growth is not balanced with a high population growth rate, productivity will decline, resulting

in a decrease in per capita income and leading to an increase in the unemployment rate.

This finding is in line with the findings carried out by Soekarno (2014) with the title "The Impact of GRDP, MSEs, Inflation and Investment on Open Unemployment in the Regency / City of East Java Province from 2007 to 2011". The findings indicate that the level of open unemployment in the regencies and cities of East Java is significantly affected by this variable, which shows an inversely proportional relationship. These findings are in line with the findings of Ayuk Misdalina (2016) with the title "Analysis of Factors Affecting the Unemployment Rate in East Java Province in 2008-2013".

CONCLUSIONS AND RECOMMENDATIONS

Panel data regression analysis shows a significant effect of HDI, minimum wage, labor participation rate, and GRDP on the open unemployment rate in Banten Province during the 2019-2023 period. The probability value below 0.05 corroborates this finding. An increase in minimum wage is positively correlated with an increase in open unemployment, while an increase in HDI, labor absorption, and GRDP are negatively correlated with open unemployment.

ADVANCED RESEARCH

This research can be developed for other regions in Indonesia by providing various samples based on the welfare level of the province.

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