VOLUME 1
Issue 2, December 2024

THE EFFECT OF MINIMUM WAGE, POPULATION, AND HUMAN DEVELOPMENT INDEX ON THE OPEN UNEMPLOYMENT RATE IN LAMPUNG PROVINCE

Azahra Anisa'i Khoiriah[1]
Rahmawati Azizah[2*]

[1]*Universitas Nahdlatul Ulama Lampung, Purbolinggo, Indonesia*
[2]*Sekolah Tinggi Ilmu Ekonomi Al-Madani Bandar Lampung, Indonesia*

Article || Published: 30/12/2024
10.58989/symmerge.v1i2.26
rahma.azizah@almadani.ac.id

How to cite || Khoiriah, Azahra Anisa'i., & Azizah, Rahmawati. (2024). The Effect of Minimum Wage, Population, and Human Development Index on The Open Unemployment Rate in Lampung Province. *Symmetry & Sigma: Journal of Mathematical Structures and Statistical Patterns*, 1(2), 132–147. https://doi.org/10.58989/symmerge.v1i2.26

YNIMGM
YAYASAN NURUL IMAN | MUARA GADING MAS
e-ISSN: 3047-6380

SYMMETRY & SIGMA
Journal of Mathematical Structures and Statistical Patterns

Abstract || This study examines the impact of minimum wages, population, and the Human Development Index (HDI) on the Open Unemployment Rate (TPT) in Lampung Province in 2023. Employing a quantitative approach with multiple linear regression analysis, this research utilizes secondary data from the Central Statistics Agency of Lampung Province. The results of the simultaneous test indicate that the three independent variables collectively have a significant effect on the TPT. However, in the partial test, only the minimum wage and population variables exhibit a significant effect, while the HDI does not show a statistically significant impact on the TPT. The regression model reveals that a 1-rupiah increase in the minimum wage corresponds to a 0.02584% increase in the TPT, while an increase of one person in the population leads to a 21.18% rise in the TPT. These findings can serve as a reference for the Lampung Provincial Government in formulating policies to reduce unemployment, with a particular focus on managing minimum wages and population growth.

Keywords || Unemployment; Minimum Wage; Population; Human Development Index

Abstrak || Penelitian ini menganalisis pengaruh upah minimum, jumlah penduduk, dan Indeks Pembangunan Manusia (IPM) terhadap Tingkat Pengangguran Terbuka (TPT) di Provinsi Lampung tahun 2023. Menggunakan pendekatan kuantitatif dengan analisis regresi linear berganda, penelitian ini mengolah data sekunder dari Badan Pusat Statistik Provinsi Lampung. Hasil uji simultan menunjukkan ketiga variabel independen secara bersama-sama berpengaruh signifikan terhadap TPT. Pada uji parsial, upah minimum dan jumlah penduduk berpengaruh signifikan, sedangkan IPM tidak berpengaruh signifikan terhadap TPT. Model regresi menunjukkan setiap kenaikan upah minimum 1 rupiah meningkatkan TPT sebesar 0,02584%, dan setiap kenaikan 1 jiwa penduduk meningkatkan TPT sebesar 21,18%. Hasil penelitian ini dapat menjadi acuan bagi pemerintah Provinsi Lampung dalam merumuskan kebijakan pengurangan pengangguran dengan fokus pada pengelolaan upah minimum dan jumlah penduduk.

Katakunci || Pengangguran; Upah Minimum; Jumlah Penduduk; Indeks Pembangunan Manusia

Introduction

Indonesia is a developing country currently undergoing a transition from an economy primarily reliant on the agricultural sector to one increasingly focused on industrial development (Polla et al., 2021). The issue of unemployment is generally easier to address in developed countries than in developing ones, as it is primarily influenced by business cycles rather than factors such as investment scarcity, population growth, or socio-political challenges (Sambur et al., 2023). As the fourth most populous country in the world, Indonesia faces various economic challenges, including unemployment, which significantly impacts societal welfare (Mouren et al., 2022). This issue arises because a substantial portion of the workforce is unable to secure employment, resulting in difficulties in meeting basic needs (Pasuria & Triwahyuningtyas, 2022).

Unemployment refers to a condition in which an individual within the labor force seeks employment but has not yet secured a job (Lumentut et al., 2023). Unemployment is a complex issue as it both influences and is influenced by multiple interrelated factors, often following unpredictable patterns (Geli et al., 2021). Huki et al. (2024) note that high unemployment rates create a domino effect, leading to various economic, political, and social consequences. Similarly, Amalia & Sari (2019) highlight that unemployment can result in widespread negative effects across these domains.

Unemployment and wage levels are interdependent, as wage regulations can directly impact labor absorption. Wibisono (2020) defines wages as compensation provided by employers to employees in exchange for work or services, expressed in monetary terms, and determined through agreements or legal regulations. The minimum wage, as outlined in Minister of Manpower Regulation No. Per-01/Men/1999, refers to the lowest monthly wage, which includes base pay and fixed allowances. Government-determined wage levels within a region influence unemployment rates; higher wages may reduce employment opportunities as businesses struggle to accommodate increased labor costs. Consequently, rising wages can contribute to higher unemployment rates (Geli et al., 2021).

Population growth is another key factor affecting unemployment. Pratiwi et al. (2021) argue that as the population increases, so does the demand for jobs, leading to higher unemployment rates when job creation fails to keep pace. A continuously expanding population

exacerbates employment challenges, as job market limitations become more pronounced, placing additional strain on regional economies.

The quality of human resources is often measured by the Human Development Index (HDI). A higher HDI correlates with increased worker productivity (Putra & Faridatussalam, 2023). The HDI serves as a crucial metric for assessing a nation's success in improving quality of life (Saputri et al., 2021). According to Okun's Law, enhanced productivity resulting from higher HDI levels fosters economic growth, which in turn is expected to generate employment opportunities and reduce unemployment (Palindangan & Bakar, 2021).

Based on the aforementioned context, this study aims to analyze the most significant factors influencing the open unemployment rate (TPT) in Lampung Province, specifically examining the roles of wages, population, and HDI through multiple linear regression analysis.

Methodology

This study employs a quantitative approach, focusing on Lampung Province in 2023. A quantitative research design emphasizes numerical data and utilizes statistical methods for analysis. Through quantitative methods, this study aims to determine the significance of group differences and the relationships between the examined variables.

Multiple Linear Regression Analysis

Data analysis in this study is conducted using multiple linear regression analysis, which must adhere to the assumptions of the Best Linear Unbiased Estimate (BLUE) (Yuniarti & Imaningsih, 2022). The classical assumption tests applied in this study include the multicollinearity test, heteroscedasticity test, autocorrelation test, normality test, and linearity test. If all classical assumptions are met, the regression model can be considered valid. The multiple linear regression model is expressed as follows:

$$Y=\beta_0+\beta_1X_1+\beta_2X_2+\cdots+\beta_nX_n+e$$

Description:

Y = Dependent variable
X_n = Independent variable
β_n = Regression coefficient (n=1,2,3,…,n)
$\beta 0$ = Intercept

e = Error term

Hypothesis Testing

1) Simultaneous Test (F-Statistic)

   The F-statistic test evaluates whether all independent variables collectively influence the dependent variable. It is used to determine whether the regression model is statistically significant (Mangirang et al., 2023).

2) Partial Test (t-Statistic)

   The t-statistic test assesses the individual effect of each independent variable on the dependent variable (George et al., 2024).

Classical Assumption Tests

Classical assumption testing is a prerequisite for linear regression analysis. This study applies five classical assumption tests: the normality test, heteroscedasticity test, autocorrelation test, multicollinearity test, and linearity test .

1) Normality Test

   The normality test examines whether the distribution of data is approximately normal. A good regression model assumes that the variables are normally or near-normally distributed (Yehosua et al., 2019).

2) Heteroscedasticity Test

This test evaluates whether there is a variance inequality in the residuals across observations in the regression model (Yehosua et al., 2019).

3) Autocorrelation Test

The autocorrelation test, conducted using the Durbin-Watson statistic, assesses whether a correlation exists between the error terms of different time periods in a regression model. The presence of such a correlation indicates an autocorrelation problem (Himo et al., 2022).

4) Multicollinearity Test

The multicollinearity test examines whether the independent variables are highly correlated. Multicollinearity may distort regression estimates and should be minimized to ensure an accurate model (Husain et al., 2023).

5) Linearity Test

The linearity test is applied in multiple linear regression to determine whether the relationship between the independent and dependent variables is linear. If the F-statistic probability value exceeds an alpha level of 0.05, the regression model meets the linearity assumption; otherwise, it does not (Septiana & Asmara, 2024).

Analysis Procedure

The data in this study were processed using R-Studio software. The research was conducted following these steps:

- Define the research problem.
- Conduct a literature review.
- Collect relevant data, where the dependent variable is the Open Unemployment Rate (TPT) (Y), and the independent variables are the Minimum Wage (X_1), Population (X_2), and Human Development Index (HDI) (X_3).
- Perform descriptive statistical analysis using numerical summaries and data visualization.
- Apply multiple linear regression analysis.
- Conduct hypothesis testing, including simultaneous and partial tests.
- Perform classical assumption tests.
- Interpret the results.
- Draw conclusions based on the findings.

Data

This study utilizes secondary data obtained from the official website of the Central Statistics Agency (BPS) of Lampung Province in 2023 (Badan Pusat Statistik Provinsi Lampung, 2024). The data collected are quantitative and cross-sectional.

Table 1. Research Variables

Variabel	Description	Unit
Y	Open Unemployment Rate	Percent
X1	Minimum Wage	Rupiah
X2	Population	Number of People
X3	Human Development Index	Percent

Analysis and Discussion

Descriptive Statistical Analysis

This section presents a numerical summary of the research variables, including the minimum, maximum, mean, median, and mode values of each variable, as displayed in Table 2. This summary facilitates an understanding of the basic characteristics of the data before proceeding with further analysis.

Table 2. Numerical Summary

Variable	Minimum	Mean	Median	Mode	Maximum
Open Unemployment Rate (Y)	3.040	13.816	10.814	4.272	45.192
Minimum Wage (X1)	2.633.284	2.713.619	2.633.284	2.633.284	2.991.349
Population (X2)	169,8	620,9	491,1	312,43	1.508,3
Human Development Index (X3)	67,79	72,12	71,55	71,72	79,86

Based on the numerical summary, the Open Unemployment Rate (TPT) ranges from a minimum value of 3,040 to a maximum of 45,192, with an average of 13,816. The median value of TPT is 10,814, while the mode, representing the most frequently occurring value, is 4,272. These figures indicate significant variation in the unemployment rate within the Lampung region.

The minimum wage ranges from 2,633,284 rupiah to 2,991,349 rupiah, with an average of 2,713,619 rupiah. The median wage is 2,642,290 rupiah, and the most frequently occurring wage is 2,633,284 rupiah. This data suggests a moderate variation in wage distribution within the region. The population variable has a minimum value of 169.8 and an average of 620.9 people. The median population count is 491.1, while the mode is 312.43, indicating a diverse distribution of population sizes within the Lampung region.

The Human Development Index (HDI) ranges from a minimum of 67.79% to a maximum of 79.86%, with an average of 72.12%. The median HDI is 71.55%, while the mode is 71.72%. These figures suggest that most regions have a relatively high HDI, with some

variations across different areas. The following section presents visualizations of the data for each variable used in this study.

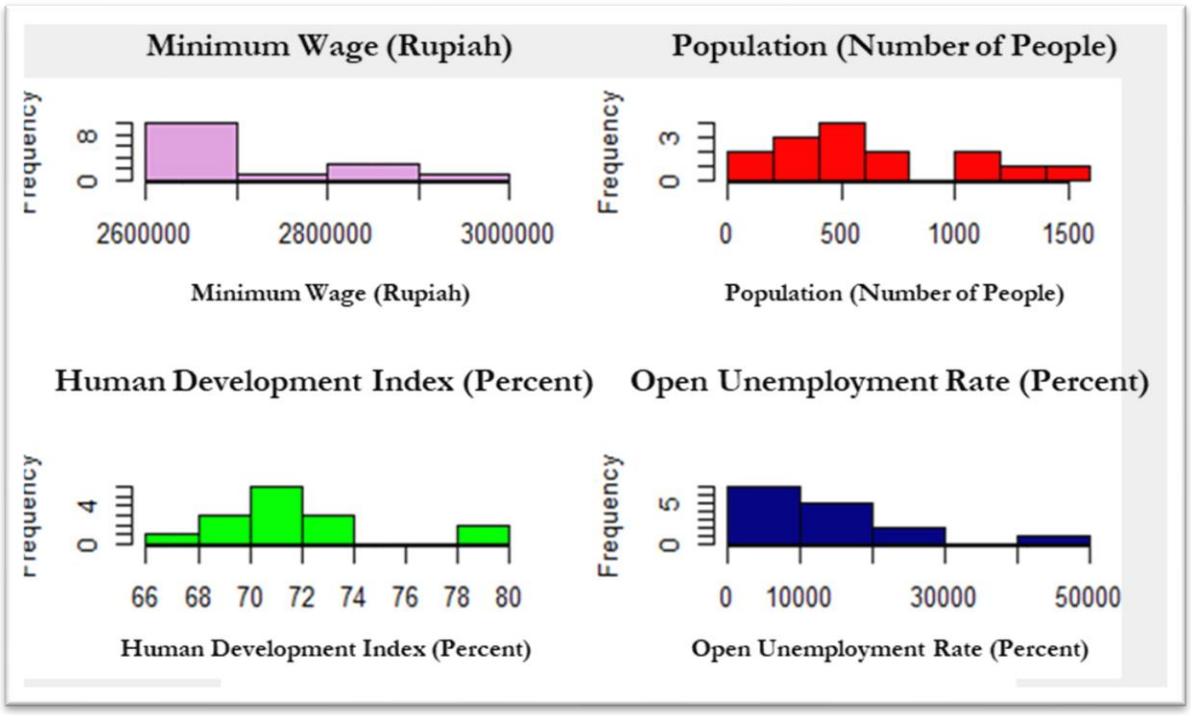

Figure 1. Histograms of Variables X_1, X_2, X_3, and Y

Based on Figure 1, the histogram of the minimum wage indicates that most of the data falls within the range of approximately 2,600,000 to 2,800,000 rupiah. Beyond this range, the frequency decreases for values between 2,800,000 and 3,000,000 rupiah. This suggests that the majority of the population earns relatively low wages, with only a few individuals receiving higher wages.

The histogram of population size shows that most areas have populations ranging from 0 to 500 individuals. The frequency declines at higher population levels, peaking around 1,500 individuals. This suggests that most regions have small populations, with only a few areas exhibiting significantly larger populations.

The histogram of the Human Development Index (HDI) illustrates that the HDI values predominantly range between 60% and 80%. The highest frequency occurs within the 70% to 74% range, indicating that most regions fall within this HDI bracket. Although some areas have higher or lower HDI values, they constitute a smaller proportion of the dataset.

The histogram of the Open Unemployment Rate (TPT) shows that most data points fall within the 0 to 10,000% range. The frequency gradually declines at higher unemployment levels, reaching

approximately 50,000%. This suggests that most areas experience relatively low unemployment rates, although some regions have significantly higher rates.

After analyzing the histograms, scatter plots are employed to further examine the relationships between variables. Scatter plots illustrate how the Open Unemployment Rate (TPT) correlates with the minimum wage, population size (J.P), and Human Development Index (HDI). These visualizations help identify potential relationship patterns, such as positive or negative correlations, the strength of associations, and data distribution trends. This deeper analysis facilitates a more comprehensive understanding of the interconnections between TPT and other variables.

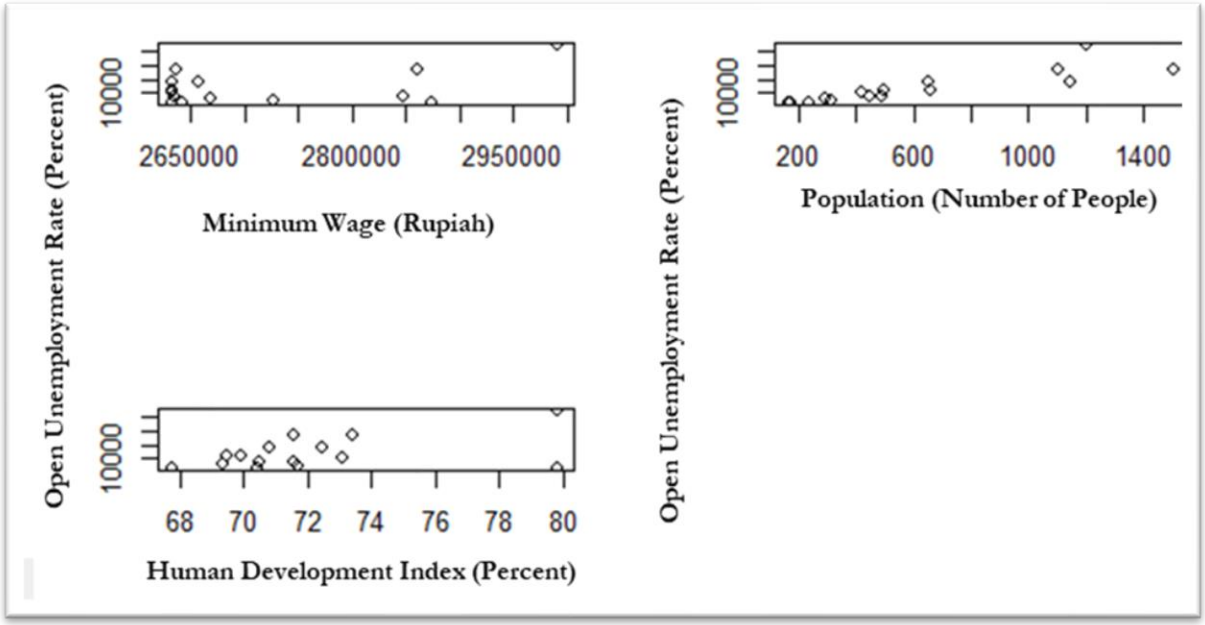

Figure 2. Scatter Plots of X_1, X_2, and X_3 Against Y

Analysis of the Relationship Between Variables

Based on Figure 2, the scatter plot depicting the relationship between the minimum wage and the Open Unemployment Rate (TPT) exhibits a horizontal dot pattern, indicating a weak correlation. An increase in the minimum wage does not appear to significantly affect the TPT. Similarly, in the scatter plot illustrating the relationship between population size and the TPT, the data points do not form a clear pattern, though there is a slight indication that an increase in population size corresponds to a marginal increase in the TPT. However, this relationship is weak and inconclusive.

Furthermore, the scatter plot for the Human Development Index (HDI) shows a widely dispersed pattern without any clear trend. This suggests that there is no strong correlation between the HDI and the TPT. In other words, an increase in the HDI does not appear to have a significant impact on the unemployment rate.

Multiple Linear Regression Analysis

This study employs multiple linear regression analysis using the R-Studio application. To ensure the validity of the regression model, two hypothesis tests were conducted to measure the impact of the independent variables on the dependent variable. The tests are as follows:

1) Simultaneous Test (F-Statistic)

Table 3. Simultaneous Test Results

Metric	Value
Multiple R-Squared	0.8827
Adjusted R-Squared	0.8507
F-Statistic	27.59
P-Value	0.02397

As shown in Table 3, the p-value is 0.02397, which is less than the significance level ($\alpha = 0.05$). This indicates that the minimum wage, population size, and HDI collectively have a statistically significant impact on the Open Unemployment Rate (TPT).

2) Partial Test (t-Statistic)

Table 4. Partial Test Results

Variable	**Estimate**	**Std.Error**	***t*-value**	**Pr(>|t|)**
Intercept	-121.500	35.880	-3.385	0.00609
X1 (Minimum Wage)	0.02584	0.01069	2.417	0.03420
X2 (Population)	2.118	3.073	6.893	0.0000261
X3 (HDI)	72.10	371.5	1.941	0.07837

Based on Table 4, the p-value for X1 (0.03420) is less than 0.05, indicating that the minimum wage has a significant partial effect on the Open Unemployment Rate (TPT). Similarly, the p-value for X2 (0.0000261) is also less than 0.05, confirming that population size significantly influences the TPT. However, the p-value for X3 (0.07837) is greater than 0.05, suggesting that the HDI does not have a statistically

significant effect on the TPT. From these partial test results, it can be concluded that the minimum wage (X1) and population size (X2) significantly influence the dependent variable (TPT) at a significance level of 5%. In contrast, the HDI (X3) does not exhibit a significant effect.

3) Classical Assumption Test

The classical assumption tests were conducted using the R-Studio application. These tests include the normality test, heteroscedasticity test, autocorrelation test, multicollinearity test, and linearity test. The results are presented in Table 5.

Table 5. Classical Assumption Test Results

	Shapiro-Wilk Normality Test	Breusch-Pagan Heteroscedasticity Test	Durbin-Watson Autocorrelation Test	Variance Inflation Factor (VIF)	Linearity Test
p-value	0.1615	0.2996	0.6606 Dw = 2.339	*X1*= 1.078008 *X2*= 1.123919 *X3*= 1.112541	0.2996

a) Normality Test

The normality test yielded a p-value of 0.1615, which is greater than 0.05. This indicates that there is insufficient evidence to reject the null hypothesis (H_0), meaning that the residuals are normally distributed, satisfying the assumption of normality.

b) Heteroscedasticity Test

The heteroscedasticity test produced a p-value of 0.2996, which is greater than 0.05. Since H_0 is not rejected, it can be concluded that there is no heteroscedasticity in the model.

c) Autocorrelation Test

The Durbin-Watson (DW) test resulted in a DW value of 2.339, indicating weak negative autocorrelation or no autocorrelation. Additionally, the p-value of 0.6606 is greater than 0.05, suggesting that there is no significant evidence to reject H_0. This confirms that there is no substantial autocorrelation in the residuals.

d) Multicollinearity Test

All variance inflation factor (VIF) values are below the commonly accepted threshold of 10, indicating that multicollinearity is not a concern in this regression model.

e) Linearity Test

The linearity test yielded a p-value of 0.2996, which is greater than 0.05. This indicates that there is insufficient evidence to reject H_0, suggesting that the regression model likely maintains a valid linear relationship.

Multiple Linear Regression Model and Its Interpretation

Based on the analysis results presented in Table 4, the multiple linear regression model is as follows:

$$\mathbf{Y = -121500 + 0.02584X_1 + 21.18X_2 + 7.21X_3}$$

This regression model indicates the following relationships:

a) Minimum Wage (X_1): An increase of 1 rupiah in the minimum wage is associated with a 0.02584% increase in the Open Unemployment Rate (TPT), assuming all other variables remain constant. This suggests that higher minimum wages tend to correlate with an increase in open unemployment.
b) Population (X_2): An increase of one person in the population is associated with a 21.18% rise in the unemployment rate, holding all other variables constant. This finding implies that population growth has a significant impact on increasing unemployment.
c) Human Development Index (HDI) (X_3): A 1% increase in the HDI is associated with a 7.21% increase in the Open Unemployment Rate (TPT). While HDI is generally linked to improved quality of life, this model suggests that higher HDI values are associated with an increase in the unemployment rate. However, the effect of HDI on unemployment is not statistically significant.

Conclusion

The results of multiple linear regression analysis, hypothesis testing, and classical assumption testing provide answers to the research questions

and objectives of this study. The analysis indicates that the variables of minimum wage (X_1), population (X_2), and the Human Development Index (X_3) influence the Open Unemployment Rate (Y) within the regression model. This finding is further supported by classical assumption testing and simultaneous hypothesis testing, which confirm the relationship between these variables and the unemployment rate.

However, based on partial hypothesis testing, only the minimum wage and population variables exhibit a statistically significant effect on the Open Unemployment Rate. In contrast, the Human Development Index (X_3) does not have a significant direct impact on open unemployment. This suggests that while human development is crucial, it is not the primary determinant in directly reducing unemployment.

Based on these findings, the Lampung Provincial Government is encouraged to consider this study as a reference in formulating policies aimed at reducing the Open Unemployment Rate. Priority should be given to factors proven to have a significant influence, namely minimum wage policies and population management. Meanwhile, efforts to enhance the Human Development Index should continue to improve overall quality of life, despite its indirect impact on unemployment reduction.

References

Journals

Amalia, E., & Sari, L. K. (2019). Analisis Spasial Untuk Mengidentifikasi Tingkat Pengangguran Terbuka Berdasarkan Kabupaten/Kota di Pulau Jawa Tahun 2017. *Indonesian Journal of Statistics and Its Applications*, *3*(3), 202–215. https://doi.org/10.29244/ijsa.v3i3.240

Geli, K. A. K., Harsono, H., & Widiawati, D. (2021). Pengaruh PDRB, Pertumbuhan Penduduk, dan UMK Terhadap Tingkat Pengangguran Terbuka di Kabupaten Flores Timur Tahun 2010-2019. *Journal of Regional Economics Indonesia*, *2*(1), 92–107. https://doi.org/10.26905/jrei.v2i1.6185

George, M., Kawung, G. M. ., & Siwu, H. F. D. (2024). Analisis Pengaruh Jumlah Penduduk, Tingkat Pendidikan dan Pertumbuhan Ekonomi Terhadap Pengangguran di Kabupaten Minahasa Utara. *Jurnal Berkala Ilmiah Efisiensi*, *24*(5), 42–55. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/57326

Himo, J. T., Rotinsulu, D. C., & Tolosang, K. D. (2022). Analisis Pengaruh Indeks Pembangunan Manusia dan Angkatan Kerja terhadap Tingkat Pengangguran Terbuka di 4 Kabupaten di Provinsi Maluku Utara Tahun 2010-2019. *Jurnal Berkala Ilmiah Efisiensi*, *22*(4), 124–135. https://ejournal.unsrat.ac.id/index.php/jbie/article/view/42238

Huki, S. C. T. L., Pangestu, A. B., Anisa, R., Markus, F., & Kinasih, F. D. (2024). Collaborative Governance dalam Menangani Masalah Pengangguran Terbuka di Kota Pangkalpinang. *TheJ Ournalish: Social and Government*, *5*(2), 157–166. https://doi.org/10.55314/tsg.v5i2.715

Husain, F., Rotinsulu, T. O., & Masloman, I. (2023). Analisis Pengangguran Tenaga Kerja Terdidik di Sulawesi Utara. *Jurnal Berkala Ilmiah Efisiensi*, *23*(3), 73–84. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/46816

Lumentut, G. M., Kalangi, J. B., & Rompas, W. F. I. (2023). Analisis Pertumbuhan Ekonomi dan Jumlah Angkatan Kerja Terhadap Pengangguran di Kota Manado. *Jurnal Berkala Ilmiah Efisiensi*, *23*(8), 1–12. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/50812

Mangirang, G. S., Masinambow, V. A. ., & Masloman, I. (2023). Analisis Faktor-Faktor Yang Mempengaruhi Tingkat Pengangguran di Kabupaten Minahasa. *Jurnal Berkala Ilmiah Efisiensi*, *23*(10), 13–24. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/51618

Mouren, V., Lapian, A. L. C. P., & Tumangkeng, S. Y. L. (2022). Pengaruh Tingkat Pendidikan, Pertumbuhan Ekonomi dan Jumlah Penduduk Terhadap Pengangguran di Kabupaten Toraja Utara. *Jurnal Berkala Ilmiah Efisiensi*, *22*(5), 133–144. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/42781

Palindangan, J., & Bakar, A. (2021). Analisis Pengaruh Tingkat Pertumbuhan Ekonomi dan Indeks Pembangunan Manusia (IPM) Terhadap Tingkat Pengangguran di Kabupaten Mimika. *Jurnal Kritis: Kebijakan, Riset Dan Inovasi*, *5*(1), 65–80. https://ejournal.stiejb.ac.id/index.php/jurnal-kritis/article/view/149

Pasuria, S., & Triwahyuningtyas, N. (2022). Pengaruh Angkatan Kerja, Pendidikan, Upah Minimum, dan Produk Domestik Bruto Terhadap Pengangguran di Indonesia. *Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, *1*(6), 795–808. https://doi.org/10.54443/sibatik.v1i6.94

Polla, E. F., Walewangko, E. N., & Tumangkeng, S. Y. L. (2021). Pengaruh Tingkat Pendidikan, Pertumbuhan Ekonomi, dan Upah Minimum Terhadap Pengangguran di Kabupaten Minahasa Selatan Tahun 2009-2019. *Jurnal Berkala Ilmiah Efisiensi*, *21*(2), 180–190. https://ejournal.unsrat.ac.id/v2/index.php/jbie/article/view/35753

Pratiwi, I. M., Marseto, M., & Sishadiyati, S. (2021). Analisis Pengaruh Jumlah Penduduk, Indeks Pembangunan Manusia dan Upah Minimum Terhadap Pengangguran di Kabupaten Bangkalan. *Jurnal Syntax Transformation*, *2*(6), 787–796. https://doi.org/10.46799/jst.v2i6.300

Putra, B. R. W., & Faridatussalam, S. R. (2023). Faktor-faktor yang Mempengaruhi Tingkat Pengangguran Terbuka di Eks Karesidenan Surakarta Periode 2017-2021. *Ekonomis: Journal of Economics and Business*, *7*(1), 584–590. https://doi.org/10.33087/ekonomis.v7i1.703

Sambur, M. K. H., Rorong, I. P. F., & Sumual, J. I. (2023). Pengaruh Jumlah Angkatan Kerja dan Indeks Pembangunan Manusia Terhadap Jumlah Pengangguran di Kabupaten Bolaang Mongondow Utara. *Jurnal Berkala Ilmiah Efisiensi*, *23*(9), 157–168. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/52471

Saputri, M. I., Juliprijanto, W., & Hutajulu, D. M. (2021). Analisis Pengaruh Upah Minimum Kabupaten/Kota (UMK), Produk Domestik Regional Bruto (PDRB), Indeks Pembangunan Manusia (IPM) dan Jumlah Penduduk Terhadap Penyerapan Tenaga Kerja di 27 Kabupaten/Kota Provinsi Jawa Barat Tahun 2015-2020. *Dinamic: Directory Journal of Economic*, *3*(1), 262–276. https://doi.org/10.31002/dinamic.v3i1.2682

Septiana, M., & Asmara, K. (2024). Pengaruh Pertumbuhan Ekonomi, Jumlah Industri dan Pendidikan Terhadap Tingkat Pengangguran Terbuka di Kabupaten Sidoarjo. *Jurnal Pendidikan Ekonomi Dan Kewirausahaan*, *8*(2), 668–677. https://doi.org/10.29408/jpek.v8i2.26048

Wibisono, C. G. (2020). Pengaruh Migrasi Masuk, Pendidikan dan Upah Minimum terhadap Pengangguran Terbuka di Kabupaten dan Kota Provinsi Jawa Timur. *Airlangga Development Journal*, *4*(1), 83–105. https://doi.org/10.20473/adj.v4i1.20170

Yehosua, S. A., Rotinsulu, T. O., & Niode, A. O. (2019). Pengaruh Inflasi dan Suku Bunga Terhadap Tingkat Pengangguran di Kota Manado. *Jurnal Berkala Ilmiah Efisiensi*, *19*(1), 20–31. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/22262

Yuniarti, Q., & Imaningsih, N. (2022). Pengaruh Pertumbuhan Ekonomi, Tingkat Kemiskinan dan Indeks Pembangunan Manusia terhadap Tingkat Pengangguran Terbuka di Kabupaten Sidoarjo. *Ekonomis: Journal of Economics and Business*, *6*(1), 44–52.

Reports

Badan Pusat Statistik Provinsi Lampung. (2024). *Financial Statistics in Lampung Province 2023*. Badan Pusat Statistik Provinsi Lampung. https://lampung.bps.go.id/en/publication/2024/11/22/795b23b04b635b003c9f9fab/financial-statistics-in-lampung-province-2023.html