

Analysis of Factors Affecting the Open Unemployment Rate

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ABSTRACT

This study aims to analyze the influence of the variables of education level, minimum wage, poverty level, foreign investment, and domestic investment on the open unemployment rate in Banten Province. The method used is descriptive quantitative with multiple linear regression analysis. This study uses secondary data for the period 2010 to 2024 and is sourced through the official website of the Central Bureau of Statistics of Banten Province. The results of data analysis show that the education level variable has a significant negative effect on the open unemployment rate and the poverty level variable has a significant positive effect on the open unemployment rate. Meanwhile, the variables of minimum wage, foreign investment, and domestic investment have no significant effect on the open unemployment rate in Banten Province. The results of this study can be a consideration for local governments in contributing to formulating more effective and sustainable employment and economic development policies in Banten Province.

INTRODUCTION

Unemployment is a condition when someone who is able and willing to work has not yet found a job, and is a problem that continues to increase as the labor force increases amid limited employment opportunities. This condition a major impact on the economy and quality of life, such as increased mental stress and the risk of poverty (Sirait *et al.*, 2023). In developing countries such as Indonesia, unemployment is an obstacle to economic growth, especially when the number of job seekers exceeds available jobs or skills do not match industry needs (Septiana & Asmara, 2024).

Unemployment in Indonesia is spread across various regions, but Banten Province on Java Island recorded the highest number of unemployed people. The increase in unemployment is caused by the uneven distribution of the population and the dominance of the population in Java Island. This inequality is closely related to the different levels of economic development between regions. As the center of national economic activity, Java Island is a magnet for people from other regions to migrate in search of employment opportunities (Priyono, 2023).

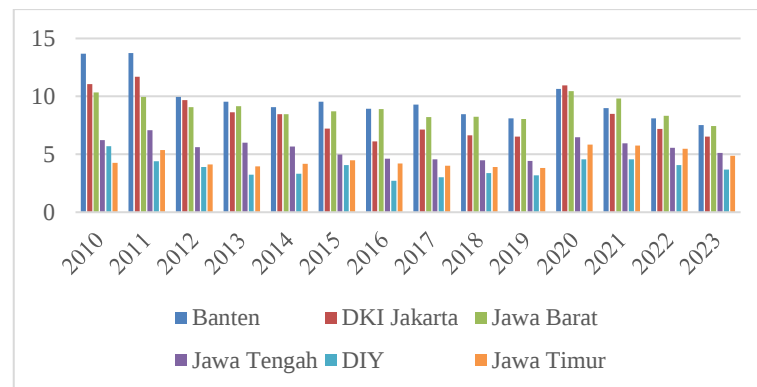


Figure 1. Open Unemployment Rate in Java Island

Source: Central Bureau of Statistics, 2025 (processed)

The open unemployment rate in provinces in Java during the period 2010 to 2024 shows a fluctuating pattern. Banten Province is categorized as a province with a relatively high open unemployment rate compared to other provinces in Java Island. DKI Jakarta recorded the highest rate at 10.95%, followed by Banten Province at 10.64% and West Java at 10.46%.

Banten Province still faces significant challenges in overcoming unemployment, which has an impact on low productivity, lack of income, and the potential for increased crime and poverty (Sopianti & Ayuningsasi, 2021). The high unemployment rate is influenced by population growth and migration flows which cause to exceed the capacity of available jobs, plus the skills gap with industry needs. As a solution, economic development can be directed at leading sectors that are able to create jobs and encourage local economic growth, including the optimization of strategic industrial areas in Banten (Peoha & Pambudyaningtyas, 2022).

Education is a investment in human resource development because increasing the productivity, skills and insights of individuals, thereby increasing their chances of getting a job (Apriliana & Setyawijaya, 2024). According to Adam

Smith's human capital theory, education and skills strongly influence income and wage structures, which in turn drive economic growth and welfare. Low education levels limit access to the world of work due to the lack of skills required by the industry (Chandra Muzakki *et al.*, 2024), while the higher a person's education, the greater their chances of being absorbed in the labor market. Therefore, good education is key in reducing unemployment by increasing the capacity and competitiveness of the workforce (Nida & Nurhamidah, 2023).

Wages are the main component of individual income that important role in meeting the needs of a decent life for workers and their families, as well as being a motivating factor in the decision to work. The minimum wage is set as the lowest wage standard by the local government by considering the needs of a decent life, and is expected to encourage justice and community welfare (Potabuga & Rorong, 2024). According to Mankiw's (2018) efficiency wage theory, providing higher wages can increase productivity, work efficiency, and strengthen motivation and relationships between workers and employers.

Poverty is a condition unable to fulfill basic needs to level of comfort. One of the main causes is the low quality of human resources, which is exacerbated by limited availability of education and training, hindering the ability to obtain decent work and adequate income (Silvia Luthfiyah Ghinastri & Wildan Syafitri, 2024). According to Nurkse's (1953) vicious circle theory of poverty, poverty is rooted in inequality of resource ownership that leads to unequal income distribution, making it difficult for individuals without jobs and income to get out of the condition without strong efforts and support.

Investment is an investment activity that includes spending on capital goods, production equipment, and services to support economic activity and creating jobs (Trihantana *et al.*, 2023). As part of the development strategy, investment is a means of allocating resources to obtain long-term economic benefits. Through supporting manufacturing process and the use of labor, investment also increases employment. According to the Marginal Efficiency of Capital (MEC) theory by Keynes (1936), investment feasibility is determined by the rate of return on additional capital goods.

Motivated by the issues described, the author was driven to carry out a study aimed at examining and identifying the determinants influencing the unemployment rate in a specific region. As a result, the research is titled "Analysis of Factors Affecting the Open Unemployment Rate in Banten Province". The findings of this study are expected to provide valuable insights and serve as a basis for policy recommendations to assist local governments in addressing and reducing unemployment in Banten Province.

LITERATURE REVIEW

Unemployment Theory

According to Keynes (1936), full employment is difficult to achieve because unemployment tends to arise due to low aggregate demand. Keynes distinguished between voluntary and involuntary unemployment, with the main focus on involuntary unemployment, where individuals want to work but cannot find a job. The decline in market demand encourages companies to reduce

production and make layoffs, resulting in an increase in unemployment (Pasuria & Triwahyuningtyas, 2022).

Human Capital Theory

Human capital theory by Schultz (1961) states that education plays an important role in increasing individual income and productivity, although it requires costs and delays the receipt of income. This view is supported by Adam Smith (1981), emphasizing that labor skills affect the wage structure and drive economic growth (Siregar *et al.*, 2022)

Becker (1992) then developed this theory by including elements of knowledge, skills, health, and economic values as shapers of human capital quality. Education and health are the main factors in human capital development, so government investment in these two sectors is needed to ensure equal access. However, economic limitations make it difficult for the poor to access these services, which can have an impact on increasing unemployment (Ramadanisa *et al.*, 2020).

Efficiency Wage Theory

The efficiency wage theory by Mankiw (2018) states that providing high wages can increase labor productivity and efficiency. Adequate wages serve as an incentive for workers to work harder, strengthen loyalty to the company, and reduce employee turnover. In addition, high wages allow workers to fulfill their nutritional needs, which has a positive impact on health and productivity, especially in developing countries. On the other hand, a decrease in wages may cause qualified workers to leave the company, affecting overall labor efficiency.

Vicious Circle of Poverty Theory

The vicious circle of poverty theory by Nurkse (1953) explains that poverty is structural and mutually reinforcing, where countries remain poor because they are trapped in poverty itself. From a macro perspective, poverty is caused by inequality in resource ownership, resulting in unequal income distribution. Limited access to capital further exacerbates this condition (Lindrianti, 2022). Low incomes also hamper the ability to save and invest, leading to limited capital accumulation and job creation, and contributing to high levels of unemployment (Goni *et al.*, 2022).

Marginal Efficiency of Capital Theory

The marginal efficiency of capital investment theory concludes that investment decisions are strongly influenced by the ratio between the marginal efficiency of capital and the interest rate. Investment tends to increase when the marginal efficiency of capital (MEC) exceeds the interest rate, as this situation is considered profitable. Conversely, if the theory is below the interest rate, investment will decline as it is considered less economically profitable. Thus, to encourage investment, it is necessary to create high profit expectations and favorable interest rate conditions. This theory also emphasizes the importance of the government's role in creating a conducive investment climate, especially during times of economic uncertainty (Khakim, 2022).

METHODOLOGY

This study employs a descriptive quantitative approach, utilizing numerical data for analysis. The data type is secondary, obtained from the official website of the Central Bureau of Statistics of Banten Province for the period 2010–2024. The method applied is multiple linear regression using the SPSS 22.0 software. The multiple linear regression model is based on the framework proposed by (Ghozali, 2018) is as follows :

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Description :

Y = Open Unemployment Rate

α_0 = Constant

$\beta_1 - \beta_5$ = Regression coefficients of each independent variable

X_1 = Education Level

X_2 = Minimum Wage

X_3 = Poverty Level

X_4 = Foreign Investment

X_5 = Domestic Investment

e = error

RESEARCH RESULT

Classical Assumption Test

a. Autocorrelation Test

Table 1. Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate	Durbin Watson
1	0,983 ^a	0,967	0,948	0,42936	2,272

Source: SPSS, 2025 (processed)

The results of data analysis indicate that the Durbin-Watson (DW) statistic in the regression model is 2.272, while the upper bound (dU) is 2.2198. Since the DW value exceeds the dU value ($DW > dU$), it can be concluded that the regression model in this study does not exhibit autocorrelation.

b. Multicollinearity Test

Table 2. Multicollinearity Test

Variable	Tolerance	VIF	Description
Education Level (X1)	0,162	8,169	No multicollinearity
Minimum Wage (X2)	0,123	8,101	No multicollinearity
Poverty Level (X3)	0,737	1,358	No multicollinearity
Foreign Investment (X4)	0,527	1,899	No multicollinearity
Domestic Investment (X5)	0,162	6,172	No multicollinearity

Source: SPSS, 2025 (processed)

The results of the data analysis indicate that all five independent variables have tolerance values greater than 0.10 and VIF values less than 10. This suggests that the regression model is free from multicollinearity issues.

c. Heteroscedasticity Test

Table 3. Heteroscedasticity Test

Variable	Value sig (2-tailed)	Terms	Description
Education Level (X1)	0,061	> 0,05	No Heteroscedasticity
Minimum Wage (X2)	0,221	> 0,05	No Heteroscedasticity
Poverty Level (X3)	0,085	> 0,05	No Heteroscedasticity
Foreign Investment (X4)	0,646	> 0,05	No Heteroscedasticity
Domestic Investment (X5)	0,908	> 0,05	No Heteroscedasticity

Source: SPSS, 2025 (processed)

Based on the data analysis results, the heteroscedasticity test for the five independent variables shows a 2-tailed significance value greater than 0.05. Therefore, it can be concluded that all five variables are free from heteroscedasticity.

d. Data Normality Test

Table 4. Data Normality Test

One - Sample Kolmogrov Smirnov Test		
		Unstandardized Residual
N		15
Normal Parameters ^{a,b}	Mean	0,0000000
	Std. Deviation	0,34425429
Most Extreme Difference	Absolute	0,176
	Positive	0,131
	Negative	-0,176
Test Statistic		0,176
Asymp. Sig (2-tailed)		0,200 ^{c,d}

Source: SPSS, 2025 (processed)

The analysis results indicate that the data are normally distributed, as evidenced by the Asymp. Sig (2-tailed) value being greater than 0.05. Specifically, the regression model shows an Asymp. Sig (2-tailed) value of 0.200, which exceeds the 0.05 threshold, confirming normality.

Hypothesis Test

Table 5. Multiple Linear Regression

Coefficient		
Model		Unstandardized Coefficients
		B
1	Constant	33,191
	Education Level (X1)	-2,593
	Minimum Wage (X2)	1,015
	Poverty Level (X3)	1,277
	Foreign Investment (X4)	-7,067
	Domestic Investment (X5)	-4,915
Dependent Variabel: Open Unemployment Rate		

Source: SPSS, 2025 (processed)

Based on the table, the regression analysis was conducted using IBM SPSS 22.0 software, and the resulting regression equation is as follows:

$$Y = 33.191 - 2.593X_1 + 1.015X_2 + 1.277X_3 - 7.067X_4 - 4.915X_5 + e$$

β_0 (Constant) = 33.191, indicating that when all independent variables (Education Level, Minimum Wage, Poverty Level, Foreign Investment, and Domestic Investment) are held constant, the Open Unemployment Rate (Y) is 33.191%.

β_1 (Education Level) = -2.593, showing a negative relationship; for every 1% increase in the education level, the Open Unemployment Rate decreases by 2.593%.

β_2 (Minimum Wage) = 1.015, indicating a positive effect; an increase in the minimum wage by IDR 1,000 leads to a 1.015% increase in the Open Unemployment Rate.

β_3 (Poverty Level) = 1.277, suggesting a positive relationship; a 1% increase in the poverty rate results in a 1.277% rise in the Open Unemployment Rate.

β_4 (Foreign Investment) = -7.067, which demonstrates a negative effect; a rise in foreign investment by USD 1 million leads to a 7.067% decrease in the Open Unemployment Rate.

β_5 (Domestic Investment) = -4.915, also indicating a negative effect; an increase of IDR 1 billion in domestic investment results in a 4.915% reduction in the Open Unemployment Rate.

a. F Test

Table 6. F Test

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48,028	5	9,606	52,105	0,000 ^b
	Residual	1,659	9	0,184		
	Total	49,687	14			

Source: SPSS, 2025 (processed)

The regression model yields an F-count of 3.33, which is greater than the F-table value, with a significance level of $0.000 < 0.05$. These results indicate that the independent variables Education Level (X_1), Minimum Wage (X_2), Poverty Level (X_3), Foreign Investment (X_4), and Domestic Investment (X_5) – collectively have a significant simultaneous effect on the dependent variable, the Open Unemployment Rate (Y).

b. T Test

Table 7. T Test

Coefficient				
Model		t Count	t Table	Sig
1	Constant	5,920	2,26216	0,000
	Education Level (X_1)	-5,568	2,26216	0,000
	Minimum Wage (X_2)	2,024	2,26216	0,074
	Poverty Level (X_3)	5,136	2,26216	0,001
	Foreign Investment (X_4)	-0,356	2,26216	0,730
	Domestic Investment (X_5)	-2,129	2,26216	0,062
Dependent Variabel : Open Unemployment Rate				

Source: SPSS, 2025 (processed)

Based on the test results, the following findings were obtained through data analysis:

1. Education Level (X_1): The t-value is -5.568, while the t-table value is 2.26216. Since $|t\text{-count}| > t\text{-table}$ ($5.568 > 2.26216$) and the significance value is $0.000 < 0.05$, the Education Level has a statistically significant effect on the Open Unemployment Rate, with a negative direction of influence.
2. Minimum Wage (X_2): The t-value is 2.024, which is less than the t-table value of 2.26216, and the significance value is $0.074 > 0.05$. This indicates that the Minimum Wage does not have a statistically significant effect on the Open Unemployment Rate, although the relationship is positive.
3. Poverty Level (X_3): The t-value is 5.136, exceeding the t-table value of 2.26216, with a significance value of $0.001 < 0.05$. Therefore, the Poverty Level has a significant positive influence on the Open Unemployment Rate.
4. Foreign Investment (X_4): The t-value is -0.356, which is smaller than the t-table value of 2.26216, and the significance value is $0.730 > 0.05$. Thus, Foreign Investment does not significantly affect the Open Unemployment Rate, although the relationship is negative.
5. Domestic Investment (X_5): The t-value is -2.129, which is less than the t-table value of 2.26216, and the significance value is $0.062 > 0.05$. This indicates that Domestic Investment has no significant effect on the Open Unemployment Rate, despite showing a negative relationship.

a. Coefficient of Determination (R^2) Test

Table 8. Coefficient of Determination (R^2) Test

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	0,983 ^a	0,967	0,948	0,42936

Source: SPSS, 2025 (processed)

Based on the data analysis results, the R Square value is 0.967, or 96.7%. This indicates that the independent variables Education Level (X_1), Minimum Wage (X_2), Poverty Level (X_3), Foreign Investment (X_4), and Domestic Investment (X_5) collectively explain 96.7% of the variance in the dependent variable, namely the Open Unemployment Rate (Y)

DISCUSSION

The Effect of Education Level on Open Unemployment Rate in Banten Province

The level of education has a significant influence on the open unemployment rate in Banten Province. The analysis shows that the higher the education level of the population, the lower the open unemployment rate. This is reflected in the negative and significant regression coefficient, which means that an increase in education can improve the quality and skills of the labor force so that they are more easily absorbed in the labor market. In other words, higher education opens up wider employment opportunities and minimizes the possibility of someone being unemployed, especially in formal sectors that require certain qualifications.

The results of this study are in line with Human Capital Theory, which states that education plays a role in improving the skills and earning potential of individuals, where each additional year of education contributes to the quality of human resources. The increase in quality can reduce the unemployment rate because individuals become more competent in entering the labor market. This finding is also in line with the research of Ari Pieter Runturambi, Tri Oldy Rotinsulu, and Audie O. Niode (2024), which shows that education level has a negative and significant effect on the open unemployment rate.

The Effect of Minimum Wage on Open Unemployment Rate in Banten Province

The minimum wage has a positive but insignificant influence on the open unemployment rate in Banten Province. The analysis shows that an increase in the minimum wage tends to be followed by an increase in the open unemployment rate, although the effect is not statistically strong enough. This could occur because could burden businesses, especially the small and medium enterprise sector, so they tend to reduce the number of workers or delay recruitment. However, because the effect is not significant, it can be concluded that the minimum wage is not the main factor.

An increase in the minimum wage is often not accompanied by an increase in labor productivity, resulting in cost pressures for companies, especially the informal sector and small and medium enterprises. This condition makes

companies reluctant to add workers or even reduce employees. The mismatch between wages and skills also makes it difficult for job seekers with low competencies to be absorbed. This finding is in line with research by Savira Apriliana and Riko Setya Wijaya (2024), which states that the minimum wage has no significant effect on the open unemployment rate.

The Effect of Poverty Level on Open Unemployment Rate in Banten Province

The poverty rate has a positive and significant influence on the open unemployment rate in Banten Province. The analysis shows that the higher the poverty rate, the higher the open unemployment rate. This indicates that people in poor conditions tend to have limited access to education, training, and decent work opportunities, making it difficult to compete in the labor market. This condition reinforces the reciprocal relationship between poverty and unemployment, where poverty is not only the result of unemployment, but also one of its main causes.

Areas with high poverty rates generally have limited infrastructure and economic opportunities, which have an impact on the narrowness of employment opportunities. This finding is in line with the Poverty Vicious Circle Theory that low income can limit the ability to create productive employment. This condition makes the poor experience limitations in accessing education and skills training, so that the quality of the workforce becomes low and less competitive in the labor market, thus encouraging an increase in the number of unemployed participants. The results of this study are the same as research conducted by Qorina Yuniarti and Niniek Imaningsih (2022), stating that the poverty rate has a positive and significant influence on the open unemployment rate.

The Effect of Foreign Investment on the Open Unemployment Rate in Banten Province

That foreign investment has no significant effect on the open unemployment rate in Banten Province, although the direction of the relationship is negative. Indicates that an increase in foreign investment tends to reduce unemployment through job creation, but the impact of foreign investment is not strong enough and significant because it is caused by the dominance of investment in capital-intensive or high-tech sectors that do not absorb much labor.

The limited quality of labor is also a major obstacle, as low skills and competencies make absorption by foreign companies not optimal. Therefore, the effectiveness of foreign investment in reducing unemployment in Banten Province still needs to be improved through human resource development and supporting policies for job creation. This finding is in line with Setiani Br Sinulingga's research (2021), which concluded that foreign investment has no significant effect on the open unemployment rate.

The Effect of Domestic Investment on Open Unemployment Rate in Banten Province

That domestic investment has no significant effect on open unemployment rate in Banten Province, although it has a negative relationship direction. Indicates that an increase in domestic investment has not been able to significantly reduce the open unemployment rate because it is caused by the tendency of investment to flow more to the capital-intensive sector, not labor-intensive, so that job creation is relatively limited.

In addition, the impact of long-term investment on unemployment is not always immediately apparent, especially if it is not balanced with an increase in the quality of the workforce. The mismatch between the needs of the industry and the competence of the labor force causes low labor absorption. Thus, the role of domestic investment in reducing unemployment is still not optimal. This finding is in line with the research of Tiara Ayu Kusumaningtyas and Muchtolifah (2023), which also states that domestic investment has no significant effect on the open unemployment rate.

CONCLUSIONS AND RECOMMENDATIONS

During the period 2010–2024, the levels of education and poverty were found to significantly influence the open unemployment rate in Banten Province. Education exhibited a negative relationship, indicating that higher education levels reduce unemployment, while poverty showed a positive relationship, contributing to higher unemployment.

Conversely, minimum wage, foreign investment, and domestic investment did not demonstrate a significant individual impact, although collectively, all variables influenced unemployment. Given these findings, it is recommended that local authorities focus on enhancing educational quality and reducing poverty. Efforts should include the expansion of vocational training, skill development, and economic empowerment programs. Additionally, fostering a supportive investment environment and implementing integrated policy measures are essential to achieving long-term unemployment reduction.

ADVANCED RESEARCH

Future research is expected to consider other variables. In addition, it is recommended to involve more data from various sectors and companies, as well as using more diverse analytical methods. The coverage area and time period should also be expanded to make the research results more comprehensive.

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REFERENCES

- Apriliana, S., & Setyawijaya, R. (2024). Pengaruh Pertumbuhan Penduduk, Kemiskinan, Tingkat Pendidikan Dan Upah Minimum Provinsi Terhadap Tingkat Pengangguran Terbuka Di Propinsi Banten. *Ekonomikawan: Jurnal Ilmu Ekonomi Dan Studi Pembangunan*, 24(1), 65–79. <https://doi.org/10.30596/Ekonomikawan.V24i1.17970>
- Chandra Muzakki, H., Sufenah, S., Altionita, V., Kusuma, J. W., Huda, M., & Bina Bangsa, U. (2024). Analisis Statistik Terhadap Penyebab Dan Dampak Pengangguran Di Provinsi Banten: Tinjau Sistematis. *Original Research*, 1, 535–544.
- Dianti, Y. (2021). Human Capital Theory sebagai Landasan Teoritis Dalam human Resource Development. *Angewandte Chemie International Edition*, 6(11), 951–952., 13(1), 5–24. [http://repo.iain-tulungagung.ac.id/5510/5/BAB 2.Pdf](http://repo.iain-tulungagung.ac.id/5510/5/BAB%20.pdf)
- Ghozali, P. H. I. (2018). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25 Edisi Ke-9* (9th Ed.). Universitas Diponegoro.
- Goni, N., Kalangi, J. B., & Tolosang, K. D. (2022). Pengaruh Pengeluaran Pemerintah Dan Indeks Pembangunan Manusia Terhadap Tingkat Kemiskinan Di Kabupaten Minahasa Tenggara. *Jurnal Berkala Ilmiah Efisiensi*, 22(5), 121–132. <https://ejournal.unsrat.ac.id/index.php/jbie/article/view/42779/37706>
- Handoyo, F., & Rudatin, A. (2023). Analisis Penyerapan Tenaga Kerja Sektor Industri Di Provinsi Banten. *Jurnal Kebijakan Ekonomi Dan Keuangan*, 2(1), 107–114. <https://doi.org/10.20885/jkek.vol2.iss1.art13>
- Khakim, M. A. (2022). Pengaruh Investasi Dalam Perekonomian. *Jurnal Penelitian Dan Pengabdian Kepada Masyarakat*, 2085, 1–10.
- Lindrianti, N. F. (2022). Pengaruh Pendapatan Asli Daerah (PAD) Dan Alokasi Dana Dari Pusat Terhadap Tingkat Kemiskinan Di Provinsi Di Yogyakarta Tahun 2015-2020. *Skripsi*, 11, 46.
- Nashichin, A. A. (2024). Analisis Pengaruh Pendapatan Domestik Regional Bruto (PDRB), Jumlah Angkatan Kerja, Tingkat Inflasi Dan Nilai Investasi Terhadap Tingkat Pengangguran Terbuka Di Kota Mataram Tahun 2013-2022. 10(2), 1–14.
- Nida, O. S., & Nurhamidah, R. (2023). Determinan Tingkat Pengangguran Terbuka Pada Kabupaten/Kota Di Provinsi Kepulauan Riau Dengan Metode Geographically Weighted Panel Regression (GWPR). *Jurnal Archipelago*, 2(02), 195–206. <https://doi.org/10.69853/ja.v2i02.57>
- Pasuria, S., & Triwahyuningtyas, N. (2022). Pengaruh Angkatan Kerja, Pendidikan, Upah Minimum, Dan Produk Domestik Bruto Terhadap Pengangguran Di Indonesia. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 1(6), 795–808.

<https://doi.org/10.54443/Sibatik.V1i6.94>

- Peoha, S. G., & Pambudyaningtyas, K. P. (2022). Economics And Development Analysis. *Inspire Journal: Economics And Development Analysis*, 2, No. 1, 1-12.
- Potabuga, M. L. M., & Rorong, I. F. P. (2024). *Minimum Terhadap Tingkat Pengangguran Terbuka Di*. 24(6), 85-98.
- Priyono. (2023). Pengaruh Pertumbuhan Ekonomi, Jumlah Penduduk, Upah Minimum Dan Indeks Pembangunan Manusia Terhadap Tingkat Pengangguran Terbuka Di Provinsi Banten Tahun 2011-2022 Skripsi. In *Nucl. Phys.* (Vol. 13, Issue 1).
- Rahminawati, N. (2023). Strategi Peningkatan Harapan Lama Sekolah (Hls) Dan Rata-Rata Lama Sekolah (Rls). *Jurnal Pendidikan Islam*, 12(2), 1411-8173. <https://doi.org/10.29313/Tjpi.V12i2.12852>
- Ramadanisa, N., Triwahyuningtyas, N., Pembangunan, U., Veteran, N., Pemerintah, P., Pendidikan, S., Sektor, P. P., & Perkapita, P. (2020). *Analisis Faktor Yang Mempengaruhi Indeks Pembangunan Manusia Di Provinsi Lampung*. 1(7), 1049-1062.
- Salsabila, N. A., Andriani, S., Mirisda, & Nohe, D. A. (2022). *Analisis Pengaruh Tingkat Partisipasi Angkatan Kerja Dan Indeks Pembangunan Manusia Terhadap Tingkat Pengangguran Terbuka Menggunakan Regresi Probit Dan Logit*. 344-353.
- 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. <https://doi.org/10.29408/Jpek.V8i2.26048>
- Setiawan, K., Haikal, M., Wicaksana, A. G., & Dermawan, D. (2023). Analisis Faktor-Faktor Yang Mempengaruhi TPT Di Provinsi Banten 2017-2021. *Jurnal Riset Rumpun Ilmu Ekonomi (JURRIE)*, 2(1), 107-120. <https://prin.or.id/index.php/JURRIE/Article/Download/1112/1189>
- Silvia Luthfiyah Ghinastri, & Wildan Syafitri. (2024). Pengaruh Upah Minimum Kabupaten/Kota (Umk) Terhadap Tingkat Pengangguran Terbuka (Tpt) Dan Kemiskinan. *Journal Of Development Economic And Social Studies*, 3(1), 72-83. <https://doi.org/10.21776/Jdess.2024.03.1.6>
- Sirait, A. F., Yulmardi, Y., & Bhakti, A. (2023). Faktor-Faktor Yang Mempengaruhi Pengangguran Terbuka Di Provinsi Jambi. *E-Jurnal Perspektif Ekonomi Dan Pembangunan Daerah*, 7(3), 137-146. <https://doi.org/10.22437/Pdped.V7i3.5512>
- Siregar, D. R. S., Ratnaningsih, S., & Nurochim, N. (2022). Pendidikan Sebagai Investasi Sumber Daya Manusia. *EDUNOMIA: Jurnal Ilmiah Pendidikan Ekonomi*, 3(1), 61-71. <https://doi.org/10.24127/Edunomia.V3i1.3017>

- Sopianti, N. K., & Ayuningsasi, A. . K. (2021). Pengaruh Pertumbuhan Ekonomi, Tingkat Inflasi, Dan Upah Minimum Terhadap Jumlah Pengangguran Di Bali. *Universitas Gadjah Mada*, 2021 | Diunduh Dari <Http://Etd.Repository.Ugm.Ac.Id/INTISARI>, 1(3), 1-192.
- Syam, S., & Wahab, A. (2020). Pengaruh Upah Dan Pertumbuhan Penduduk Terhadap Tingkat Pengangguran Di Kota Makassar. *Iqtisudana*, 1(1), 35-54.
- Teguh Ali Fikri, Y. (2021). Analisis Peningkatan Angka Pengangguran Akibat Dampak Pandemi Covid 19 Di Indonesia. *Indonesian Journal Of Business Analytics*, 1(2), 107-116. <Https://Doi.Org/10.54259/Ijba.V1i2.59>
- Trihantana, R., Fariz, M. A., Sundari, D., Fariz, M. A., & Fitria, M. (2023). Perspektif Ekonomi Dan Bisnis Islam Mengenai Pengaruh Investasi, Upah Minimum Regional Dan Indeks Pembangunan Manusia Terhadap Tingkat Pengangguran Terbuka Di Provinsi Jawa Barat Tahun 2002-2021. *Sahid Business Journal*, 2(02), 89-98. <Https://Doi.Org/10.56406/Sahidbusinessjournal.V2i02.97>
- Yuliani, N. M., Fuadi, A. B., Arkan, M. N., & Helmi, S. G. Y. (2023). Pengaruh PMA Dan PMDN Terhadap Pertumbuhan Ekonomi 34 Provinsi Di Indonesia. *Jemes: Jurnal Ekonomi Manajemen Dan Sosial*, 6(2), 43-50.