



Impact of Economic Growth, Minimum Wage, Labor Force Participation Rate, and Population Size on the Open Unemployment

Raden Muhammad Rusydan^{1*}, Riko Setya Wijaya²

Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia¹

Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia²

Corresponding Email: radenmuhammadrusydan@gmail.com*

Received: 10-05-2024

Reviewed: 20-05-2024

Accepted: 10-06-2024

Abstract

Unemployment is a complex economic issue where individuals capable and willing to work cannot find suitable employment. This study examines the impact of economic growth, minimum wage, labor force participation rate (LFPR), and population size on the open unemployment rate (OUR) in Sidoarjo Regency. Using secondary time series data from 2009 to 2023, a descriptive quantitative approach with multiple linear regression analysis was employed, processed with SPSS 25 software. The findings indicate that, simultaneously, all variables significantly influence the open unemployment rate (OUR). Specifically, economic growth shows a negative but insignificant effect, minimum wage has a positive significant effect, labor force participation rate (LFPR) exhibits a negative but insignificant effect, and population size demonstrates a negative significant effect. This study provides insights into the dynamics influencing unemployment in Sidoarjo Regency, highlighting the critical roles of minimum wage and population size in shaping the employment landscape. Understanding these factors can help policymakers develop strategies to reduce unemployment and promote economic stability.

Keywords: Economic Growth, Minimum Wage, Population Size, LFPR, OUR

Introduction

Unemployment poses a serious challenge in the macroeconomic context, significantly impacting a country's economic stability. High unemployment is a major issue in Indonesia's labor market that must be addressed promptly (Franita & Fuady, 2019). When many individuals are unable to find jobs that match their skills and expertise, it creates a significant gap in the economy. High unemployment rates lead to the wastage of resources and imply a loss of potential productivity that job seekers could contribute (Samuelson & Nordhaus, 2004).

Impact of Economic Growth, Minimum Wage, Labor Force Participation Rate, and Population Size on the Open Unemployment

The issue of unemployment in Sidoarjo Regency requires serious attention in the context of regional economic development. The main factor contributing to the high open unemployment rate (OUR) in Sidoarjo Regency is the COVID-19 pandemic. The industrial sector, most affected by the pandemic in Sidoarjo Regency, experienced a decline in economic activity as companies were unable to pay wages due to reduced sales, leading to reduced working hours and even layoffs. Two years post-pandemic, unemployment in Sidoarjo Regency remains unresolved as the OUR post-pandemic is still not lower than pre-pandemic levels and remains the highest in East Java Province (BPS, 2020).

According to (Sis Putro & Hendra Setiawan, 2013), unemployment arises when the number of labor force does not align with the job opportunities available. This discrepancy occurs due to the slow growth of job opportunities, making it difficult to accommodate the labor force willing to work.

Economic growth plays a vital role in managing the OUR in a country. Essentially, consistent economic growth can create additional job opportunities, reduce unemployment rates, and improve the welfare of the population. When the economy grows, companies tend to expand their operations, increase production, and create new jobs. Over significant periods, economic growth has been a key benchmark for assessing the success of economic development (Nuraini, 2017).

The unemployment issue in Sidoarjo Regency is significantly related to minimum wage policies. Implementing a minimum wage can influence labor market dynamics and unemployment rates. If the minimum wage is set at a relatively high level, businesses, especially small and medium enterprises, might face significant cost pressures. This situation could hinder them from hiring new workers or retaining existing ones. Conversely, a moderate minimum wage setting can strike a better balance between workers' rights and companies' ability to maintain or create jobs.

The Labor Force Participation Rate (LFPR) reflects the number of people either looking for work or currently employed within a population (Faizah & Woyanti, 2023). A high participation rate can create tougher competition in the labor market as more individuals compete for limited job opportunities. Conversely, a low participation rate can reduce the potential for labor absorption, increasing open unemployment rates. In Sidoarjo Regency, increasing the LFPR must be addressed alongside efforts to reduce the OUR. This can be achieved through skills training programs aligned with local market needs and strengthening cooperation between the government, education sector, and industry.

The population size of Sidoarjo Regency potentially influences the OUR in the region. With ongoing population growth, there is a potential increase in labor market competition. If job creation does not keep pace with population growth, there is a risk of a gap between labor supply and demand, potentially increasing the unemployment rate (Simanjuntak, 1985). Intense job competition can have negative effects, especially if economic growth and job creation cannot accommodate rapid population growth.

The continuous efforts by the Sidoarjo Regency Government to boost local economic growth and expand employment opportunities have shown positive results. Gradually, the open unemployment rate (OUR) in Sidoarjo Regency has declined, reaching 8.05 percent as of August 2023 compared to 10.87 percent in August 2020. This 2.82 percent reduction marks the highest OUR decrease in East Java Province, reflecting successful efforts in effectively addressing unemployment issues.

Literature Review

Economic Growth

According to the classical theory of Adam Smith (Anggoro & Soesatyo, 2015), rapid economic growth can play a role in reducing the unemployment rate in a region. This theory indicates a positive correlation between economic growth and labor absorption, which can help decrease unemployment rates. As economic growth increases, production also expands, and this growth is expected to create more job opportunities to meet the rising demand for production. Therefore, the increase in labor absorption driven by higher economic growth can lower the unemployment rate.

Minimum Wage

According to Keynesian theory (Mankiw, 2018), the cause of unemployment can be attributed to wage rigidity, which is the inability of wages to adjust quickly to the equilibrium between labor supply and demand. In an ideal situation, wages would adjust according to changes in labor market dynamics, so that the number of available workers matches the number of jobs needed. However, in reality, there is rigidity or an inability of wages to change rapidly.

Labor Force Participation Rate

Elmeskov and Pichelmann, as cited in (Prayogo, 2020), state that there is a negative relationship between the labor force participation rate and the open unemployment rate. In other words, regions with a high labor force participation rate tend to have low unemployment rates, while regions with a low labor force participation rate tend to have high unemployment rates.

Population Size

According to Malthus, as cited in (Brahma et al., 2019), if the growth of the labor population surpasses the rate of food production, real wages will decline. This is due to the rising cost of living, particularly food costs, driven by the surge in population. Conversely, when real wage levels in an area are high, this can create unemployment issues. Malthus concluded that population growth outpacing job growth leads to an imbalance between the number of job seekers and the available jobs. Consequently, this gap becomes the primary cause of unemployment.

Impact of Economic Growth, Minimum Wage, Labor Force Participation Rate, and Population Size on the Open Unemployment

Open Unemployment Rate

According to Keynesian theory, as discussed in (Desmawan et al., 2021), unemployment is caused by low aggregate demand, which leads to a slowdown in economic growth. The main cause is not considered to be a decline in production, but rather a decrease in the level of consumption. In this context, an increase in the labor force can lead to a decrease in wage levels, which in turn reduces people's purchasing power to buy goods. This decline in purchasing power harms producers, making them inefficient in absorbing labor. Therefore, this theory emphasizes the need for government intervention to maintain aggregate demand, create jobs, and address unemployment issues.

Research Method

This research employs a quantitative descriptive method, focusing on understanding and describing a specific phenomenon involving the characteristics of variables within a particular life context. These variables are then analyzed objectively by applying a theoretical approach (Jaya, 2020). Research using an associative method through a quantitative approach aims to demonstrate the relationship between two or more variables. The focus of this study is to understand how one variable relates to another and whether this relationship can cause changes (Hermawan & Yusran, 2017).

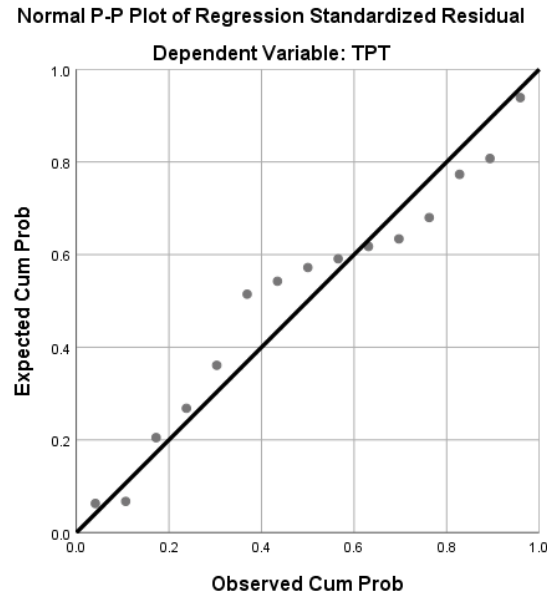
The independent variables in this research include economic growth, minimum wage, labor force participation rate (LFPR), and population size, while the dependent variable is the open unemployment rate (OUR). The data is sourced from the official website of the Central Statistics Agency (BPS) and the Sidoarjo Regency government, covering the years from 2009 to 2023. This comprehensive dataset ensures a thorough analysis of the factors influencing the open unemployment rate (OUR) in Sidoarjo Regency, providing valuable insights for local economic policy formulation.

For the analysis, multiple linear regression is used as the primary tool. This method includes classical assumption tests, such as tests for normality, autocorrelation, multicollinearity, and heteroscedasticity, to examine the relationships between variables effectively. The analysis in this research is supported by the use of IBM SPSS Statistics version 25 software as an aid for testing.

Results

A. Normality Test

Figure 1. Normality Test (P-P Plot) Results



Source: SPSS 25

Based on Figure 1, the diagonal line in the graph represents the ideal condition of data following a normal distribution. The points around the diagonal line reflect the state of the data being tested. The figure shows that most of the points are very close to or even aligned with the diagonal line. From these results, it can be concluded that the obtained data follows a normal distribution or has a distribution that is close to normal.

B. Autocorrelation Test

Table 1. Autocorrelation Test Results

Change Statistics					Durbin-Watson
R Square Change	F Change	df1	df2	Sig. F Change	
0.829	12.162	4	10	0.001	1.504

Source: SPSS 25

The autocorrelation test in this research produced a DW Test value of 1.504. For this equation, the sample size (n) is 15, and the number of independent variables (k) is 4. According to the Durbin-Watson (DW) table, the lower bound (dL) is 0.6852, and the upper bound (dU) is 1.9774. The DW value lies between dL and dU, placing it in the zone of uncertainty. Consequently, a runs test is required to confirm whether or not there are symptoms of autocorrelation. The following results were obtained from the runs test:

Impact of Economic Growth, Minimum Wage, Labor Force Participation Rate, and Population Size on the Open Unemployment

Table 2. Runs Test Results

	Unstandardized Residual
Test Value ^a	.22259
Cases < Test Value	7
Cases \geq Test Value	8
Total Cases	15
Number of Runs	8
Z	.000
Asymp. Sig. (2-tailed)	1.000

Source: SPSS 25

After conducting the Runs Test, the Asymp. Sig. (2-tailed) value obtained is 1.000. This indicates that, based on the previous decision-making basis, there are no symptoms of autocorrelation because the Asymp. Sig. (2-tailed) value is ≥ 0.05 . Thus, based on the results of testing the classical assumptions overall, it is concluded that the model does not experience bias and can proceed to the next stage of testing.

C. Multicollinearity Test

Table 3. Multicollinearity Test Results

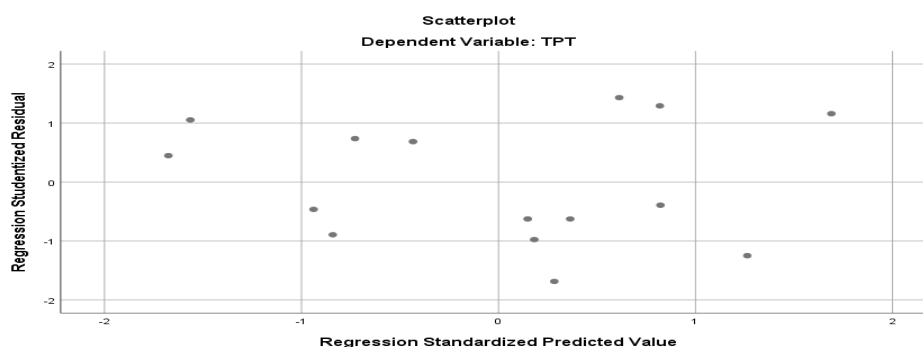
Variabel	Tolerance	VIF	Ketentuan	Keterangan
X1	0.483	2.068	≤ 10	Bebas Multiko
X2	0.272	3.674	≤ 10	Bebas Multiko
X3	0.501	1.996	≤ 10	Bebas Multiko
X4	0.272	3.682	≤ 10	Bebas Multiko

Source: SPSS 25

From the table presented above, it can be concluded that all independent variables, namely X1, X2, X3, and X4, do not show signs of multicollinearity or can be said to be free from multicollinearity issues because the Variance Inflation Factor (VIF) values are less than 10.

D. Heteroscedasticity Test

Table 4. Heteroscedasticity Test Results



Source: SPSS 25

Based on the graph, the points are randomly and evenly scattered above and below the 0 on the Y-axis. Therefore, it can be concluded that there are no signs of heteroskedasticity in the regression model in this study.

E. Multiple Linear Regression Analysis

Table 5. Regression Test Results

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	75.788	23.551	
1 Pertumbuhan Ekonomi	-0.177	0.163	-0.188
Upah Minimum	1.879E-06	0	1.002
TPAK	-0.072	0.202	-0.061
Jumlah Penduduk	-3.268E-05	0	-1.241

a. Dependent Variable: TPT

Source: SPSS 25

Based on the results in table 4.10, the regression equation model is as follows:

$$Y = 75.788 - 0.177X1 + 0.000001879X2 - 0.072X3 - 0.00003268X4 + e$$

Based on the regression results, the following regression equation can be inferred:

1. The constant value (a) is 75.788. This value indicates that when Economic Growth (X1), Minimum Wage (X2), LFPR (X3), and Population Size (X4) are considered constant, OUR (Y) is 75.788%.
2. The regression coefficient value for Economic Growth (X1) is -0.177, indicating a negative effect on OUR (Y). It can be interpreted that if Economic Growth increases by 1%, OUR in Sidoarjo District will decrease by 0.177%, assuming other variables are constant.
3. The regression coefficient value for Minimum Wage (X2) is 0.000001879, indicating a positive effect on OUR (Y). It can be interpreted that if Minimum Wage increases by 1 rupiah, OUR in Sidoarjo District will increase by 0.000001879%, assuming other variables are constant.
4. The regression coefficient value for LFPR (X3) is -0.072, indicating a negative effect on OUR (Y). It can be interpreted that if LFPR increases by 1%, OUR in Sidoarjo District will decrease by 0.072%, assuming other variables are constant.
5. The regression coefficient value for Population (X4) is -0.00003268, indicating a negative effect on OUR (Y). It can be interpreted that if Population increases by 1 person,

Impact of Economic Growth, Minimum Wage, Labor Force Participation Rate, and Population Size on the Open Unemployment

OUR in Sidoarjo District will decrease by 0.00003268%, assuming other variables are constant.

F. Coefficient of Determination

Table 6. Coefficient of Determination Test Results

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.911 ^a	0.829	0.761	1.22564	0.829	12.162	4	10	0.001	1.504
a. Predictors: (Constant), Jumlah Penduduk, Pertumbuhan Ekonomi, TPAK, Upah Minimum										
b. Dependent Variable: TPT										

Source: SPSS 25

The R-squared value obtained from SPSS calculation is 0.829. This means that 82.9% of the independent variables are able to explain the dependent variable. Meanwhile, the remaining 17.1% is explained by other variables not examined in this study.

G. F-Test

Table 7. F-Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73.079	4	18.270	12.162	.001 ^b
	Residual	15.022	10	1.502		
	Total	88.101	14			

Source: SPSS 25

The obtained F-value is 12.162, while the critical F-value is 3.36. Hence, it is evident that the obtained F-value exceeds the critical F-value. Thus, it can be inferred that all the independent variables collectively influence the dependent variable.

H. t-Test

Table 8. t-Test Results

Variabel	t Hitung	t Tabel	Sig.
Pertumbuhan Ekonomi (X1)	-1.087	2.228	0.302
Upah Minimum (X2)	3.716	2.228	0.004
TPAK (X3)	-0.358	2.228	0.728
Jumlah Penduduk (X4)	-4.375	2.228	0.001

Source: SPSS 25

Based on Table 8, the analysis results are as follows:

1. The Influence of the Economic Growth on Open Unemployment Rate

The variable Economic Growth obtains a t-value of -1.087 with a t-table value of 2.228. Therefore, it is known that the calculated t-value > the t-table value with a significance level of $0.302 > 0.05$. This indicates that X1 does not have a significant partial effect on variable Y.

2. The Influence of the Minimum Wage on Open Unemployment Rate

The variable Minimum Wage obtains a t-value of 3.716 with a t-table value of 2.228. Thus, it is known that the calculated t-value > the t-table value with a significance level of $0.004 < 0.05$. This means that X2 has a significant partial effect on variable Y.

3. The Influence of the Labor Force Participation Rate on Open Unemployment Rate

The variable Labor Force Participation Rate obtains a t-value of -0.358 with a t-table value of 2.228. Therefore, it is known that the calculated t-value > the t-table value with a significance level of $0.728 > 0.05$. This implies that X3 does not have a significant partial effect on variable Y.

4. The Effect of Population Size on Open Unemployment Rate

The variable Population Size obtains a t-value of -4.375 with a t-table value of 2.228. Thus, it is known that the calculated t-value > the t-table value with a significance level of $0.001 < 0.05$. This indicates that X4 has a significant partial effect on variable Y.

Discussion

The variable of economic growth does not have a significant impact on the Open Unemployment Rate (OUR) in Sidoarjo Regency from 2009 to 2023. Based on the research findings, the increase in Gross Regional Domestic Product (GRDP), as an indicator of economic growth, has a regression coefficient value of -0.177. This indicates that a 1% increase in economic growth would reduce the OUR by 0.177%, but with a partial test significance value of 0.302 ($0.302 > 0.05$). Therefore, H0 is accepted and H1 is rejected, indicating that the increase in economic growth has not yet significantly affected the OUR in Sidoarjo Regency.

Sidoarjo Regency, being one of the major industrial centers in East Java, demonstrates that high economic growth does not always correlate with adequate labor absorption. Economic growth might occur due to increased productivity or technology that does not require much additional labor, thus having an insignificant impact on reducing unemployment. This study aligns with (Prayogo, 2020) findings, which also showed a negative and insignificant relationship between economic growth and OUR. The production characteristics in Sidoarjo, dominated by capital-intensive industries, contribute to this. Data from (BPS Kabupaten Sidoarjo, 2024) shows that over the past five years, manufacturing industries have dominated with 48.61%, followed by wholesale and retail trade, and repair of motor vehicles and motorcycles at 16.18%, and transportation and warehousing at 13.55% in 2023. These industries employ higher capital and advanced technology, reducing labor needs and increasing

Impact of Economic Growth, Minimum Wage, Labor Force Participation Rate, and Population Size on the Open Unemployment

the skill or qualification levels required for jobs, ultimately making economic growth's impact on the OUR insignificant.

The minimum wage variable significantly affects the Open Unemployment Rate (OUR) in Sidoarjo Regency from 2009 to 2023. The research findings show that the minimum wage has a regression coefficient of 0.000001879, indicating that a 1-rupiah increase in the minimum wage results in a 0.000001879% increase in the OUR, with a partial test significance value of 0.004 ($0.004 < 0.05$). Therefore, H_0 is rejected, and H_1 is accepted, demonstrating that the rise in the minimum wage does influence the OUR.

This result aligns with the research by (Simbolon et al., 2023), which found that the minimum wage has a positive and significant effect on the open unemployment rate. This means that higher minimum wages correlate with higher open unemployment rates. In Sidoarjo Regency, the implementation of the minimum wage tends to reduce labor demand from companies, leading to an increase in unemployment. This observation supports Keynesian theory, as mentioned by (Mankiw, 2018), which suggests that wage rigidity is one cause of unemployment. Wage rigidity may result from factors such as government minimum wage regulations, labor unions, or social norms. In Sidoarjo Regency, the relatively high minimum wage of Rp 4,518,581 poses a challenge for companies striving to enhance efficiency and competitiveness, as they cannot flexibly adjust wages according to market conditions. Consequently, the increase in the minimum wage prompts companies to cut down on their workforce, thereby raising the open unemployment rate.

The Labor Force Participation Rate (LFPR) variable does not have a significant impact on the Open Unemployment Rate (OUR) in Sidoarjo Regency from 2009 to 2023. Research findings show that the LFPR variable has a regression coefficient of -0.72, indicating that a 1% increase in LFPR would decrease the OUR by 0.72%. However, with a partial test significance value of 0.728 ($0.728 > 0.05$), this implies that the increase in LFPR has not significantly influenced the OUR.

Data from (BPS Kabupaten Sidoarjo, 2024) shows that 62.34% of Sidoarjo's population works in the formal sector, while 37.66% are employed in the informal sector. The informal sector typically lacks job security and stable wages but remains a viable option for many workers. For instance, street vendors, domestic workers, and daily laborers might not be considered unemployed despite their job instability. If many workers shift to the informal sector due to insufficient formal job opportunities or inadequate qualifications, they may be classified as hidden unemployed. Hidden unemployment occurs when the workforce in an economic activity exceeds the actual requirement (Desmawan et al., 2021). An increase in labor force participation moving into the informal sector can explain the statistically insignificant reduction in the unemployment rate, as official unemployment data may not fully capture those in the informal sector. This aligns with the research by (Putra & Hidayah, 2023), which indicates that while LFPR negatively affects OUR, a high LFPR does not necessarily ensure a reduction in open unemployment.

The variable population size has a significant influence on the Open Unemployment Rate (OUR) in Sidoarjo Regency from 2009 to 2023. Based on the research findings, the

population variable has a regression coefficient of -0.00003268, indicating that for every increase of one person in the population, the OUR decreases by 0.00003268%, with a partial test significance value of 0.001 ($0.001 < 0.05$). This demonstrates that the increase in population size significantly affects the reduction of OUR.

This finding aligns with Ibn Khaldun's population cycle theory cited by (Tungka et al., 2024), which states that an increase in population leads to higher demand for goods and services, thereby boosting production and the need for labor, ultimately lowering the unemployment rate. The increase in population also expands the labor market and creates more job opportunities, supported by proactive government policies such as labor-intensive programs and micro-enterprise assistance. Data from (BPS Kabupaten Sidoarjo, 2023) shows a decrease in OUR from 10.97% in August 2020 to 8.05% in August 2023, reflecting the effectiveness of these interventions. Additionally, the role of the informal sector and Small, Medium Enterprises (SMEs) in Sidoarjo is significant in absorbing labor not accommodated by the formal sector. Approximately 206,745 SMEs are spread across 18 districts, creating new jobs and reducing pressure on the formal labor market. Although overall economic growth is not significant, the informal sector can absorb excess labor, positively impacting the reduction of OUR. This is consistent with Kuntiariti's (2018) research, which found that an increase in population size has a significantly negative impact on OUR, meaning that despite the annual increase in population in Sidoarjo Regency, this actually reduces the OUR significantly.

Conclusion

Based on the analysis of the impact of economic growth, minimum wages, labor force participation rate (LFPR), and population size on the open unemployment rate (OUR) in Sidoarjo Regency from 2009 to 2023, the conclusions are as follows: The research results indicate that economic growth has a negative but not significant effect on OUR. Conversely, minimum wages have a positive and significant effect on OUR. The labor force participation rate (LFPR) shows a negative but not significant impact on OUR. And, the population size has a negative and significant effect on OUR.

Suggestion

To enhance the impact of economic growth on the Open Unemployment Rate (OUR) in Sidoarjo Regency, several measures can be taken. These include diversifying the economy by developing labor-intensive sectors such as light manufacturing, textiles, and agribusiness, and increasing support for small and medium-sized enterprises (SMEs) through training, access to capital, and marketing. Additionally, investing in business and transportation infrastructure can attract new investments and boost productivity, thereby reducing unemployment. To address the negative impact of minimum wage increases, the government needs to evaluate the industry's capacity before setting wages, provide incentives and support to small businesses to help them adjust, and implement skills training programs for workers to improve productivity, allowing employers to retain their workforce.

Impact of Economic Growth, Minimum Wage, Labor Force Participation Rate, and Population Size on the Open Unemployment

To strengthen the impact of the labor force participation rate (LFPR) on OUR, the government should improve access to vocational education and job training, build partnerships with educational institutions or industries to create relevant internship programs, and launch campaigns to increase labor force participation, particularly among women and youth, with the aim of enhancing the quality of the workforce. To manage the significant negative impact of population growth on OUR in Sidoarjo Regency, effective family planning policies and population growth management programs are needed. Good urban and housing planning is also crucial to accommodate population growth and support inclusive economic growth. Moreover, facilitating labor migration to areas with better job opportunities can reduce pressure on the local labor market, maintaining a balance between the population size and available job opportunities.

References

- Anggoro, M. H., & Soesatyo, Y. (2015). PENGARUH PERTUMBUHAN EKONOMI DAN PERTUMBUHAN ANGKATAN KERJA TERHADAP TINGKAT PENGANGGURAN DI KOTA SURABAYA. *Journal of Economic and Management (JECMA)*, 3. <https://doi.org/10.46772/jecma.v5i1.955>
- Badan Pusat Statistik. (2020). *Kabupaten Sidoarjo Dalam Angka*. <https://sidoarjokab.bps.go.id/publication/2020/04/27/ae347c4e214566fac7797915/kabupaten-sidoarjo-dalam-angka-2020.html>
- Badan Pusat Statistik Kabupaten Sidoarjo. (2023). *Laporan Eksekutif Keadaan Angkatan Kerja Kabupaten Sidoarjo 2023*. xiv–50. <https://jatim.bps.go.id/publication/2023/06/19/06fe8b3159a55a17a506f4d2/publikasi-laporan-eksekutif-keadaan-angkatan-kerja-jatim-2022.html>
- Badan Pusat Statistik Kabupaten Sidoarjo. (2024). *PRODUK DOMESTIK REGIONAL BRUTO KABUPATEN SIDOARJO MENURUT LAPANGAN USAHA 2019-2023* (Volume 8). Badan Pusat Statistik Kabupaten Sidoarjo.
- Brahma, V., Sembiring, P., & Sasongko, G. (2019). *Pengaruh Produk Domestik Regional Bruto, Inflasi, Upah Minimum, dan Jumlah Penduduk Terhadap Pengangguran di Indonesia Periode 2011-2017*. 3(4), 430–443.
- Desmawan, D., Syaifudin, R., Sari, T. N., Mamola, R., Haya, H., & Indriyani, D. (2021). *FAKTOR DOMINAN RELATIVITAS KEMISKINAN: PENDEKATAN ANALISIS DATA PANEL*. CV Media Sains Indonesia.
- Faizah, U. N., & Woyanti, N. (2023). Analisis Pengaruh Pendidikan, Partisipasi Kerja, Dan Upah Minimum Terhadap Pengangguran Di Provinsi Banten Tahun 2011-2020. *BISEKER (Business Economic Entrepreneurship)*, 6(1), 48. <https://doi.org/10.61689/bisecer.v6i1.386>
- Franita, R., & Fuady, A. (2019). Analisa Pengangguran Di Indonesia. *Nusantara (Jurnal Ilmu Pengetahuan Sosial)*, 2, 90.
- Hermawan, A., & Yusran, H. L. (2017). *Penelitian Bisnis Pendekatan Kuantitatif*. Kencana.
- Jaya, I. M. L. M. (2020). *Metode Penelitian Kuantitatif dan Kualitatif: Teori, Penerapan, dan*

Riset Nyata. Anak Hebat Indonesia.

- Mankiw, N. G. (2018). *Pengantar Ekonomi Makro (Edisi 7)*. Jakarta : Salemba Empat.
- Nuraini, I. (2017). Kualitas Pertumbuhan Ekonomi Daerah Kabupaten/Kota Di Jawa Timur. *Seminar Nasional & Call For Paper, FEB Unikama “Peningkatan Ketahanan Ekonomi Nasional Dalam Rangka Menghadapi Persaingan Global” Malang*, 79–93.
- Prayogo, S. A. (2020). Analisis faktor-Faktor yang Memengaruhi Tingkat Pengangguran Terbuka Kabupaten/Kota di Provinsi Jawa Timur Tahun 2014-2018. *Jurnal Ilmiah Mahasiswa FEB*, 8(2), 1–10. <https://garuda.ristekbrin.go.id/documents/detail/1750063>
- Putra, G. V. H., & Hidayah, N. (2023). Analisis Pengaruh Jumlah Penduduk, Pendidikan, Tingkat Partisipasi Angkatan Kerja, Upah Minimum Kabupaten/Kota Dan Produk Domestik Regional Bruto Terhadap Pengangguran Terbuka Di Provinsi Jawa Barat Tahun 2018-2021. *Komitmen: Jurnal Ilmiah Manajemen*, 4(1), 149–158. <https://doi.org/10.15575/jim.v4i1.23731>
- Samuelson, P. A., & Nordhaus, W. D. (2004). *Ilmu Makro Ekonomi, Edisi Tujuh Belas (17th ed.)*. PT. Media Global Edukasi.
- Simanjuntak, P. J. (1985). *Pengantar Ekonomi Sumber Daya Manusia*. Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Simbolon, C. M., Karo, R. U. K., Datuk Sazli Daffa, & Hidayat, N. (2023). Analisis Pengaruh Ipm, Ump Dan Tingkat Partisipasi Angkatan Kerja Terhadap Pengangguran Terbuka Di Indonesia. *Journal of Social and Economics Research*, 5(2), 451–463. <https://doi.org/10.54783/jser.v5i2.113>
- Sis Putro, A., & Hendra Setiawan, A. (2013). Analisis Pengaruh Produk Domestik Regional Bruto, Tingkat Upah Minimum Kota, Tingkat Inflasi Dan Beban/Tanggungannya Penduduk Terhadap Pengangguran Terbuka Di Kota Magelang Periode Tahun 1990 – 2010. *Diponegoro Journal of Economics*, 2(3), 1–14. <http://ejournal-s1.undip.ac.id/index.php/jme>
- Tungka, E. M., Maramis, M. T. B., & Kawung, G. M. V. (2024). *Pengaruh Indeks Pembangunan Manusia, Pengangguran, Pertumbuhan Ekonomi, dan Pengeluaran Pemerintah Terhadap Tingkat Kemiskinan di Provinsi Sulawesi Utara*. 25(2), 180–194.