



Analysis Of The Influence Of Economic Growth, TPAK, And UMP On The Open Unemployment Rate In Indonesia 2010-2024

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ABSTRACT

One of the crucial parameters used to evaluate labor market conditions and national economic stability is the Open Unemployment Rate (TPT). The pattern of changes in the TPT in Indonesia over the 2010–2024 period shows inconsistent variations, which are closely influenced by shifts in macroeconomic factors and dynamics in the employment sector. The purpose of this study is to analyze the influence of economic growth, the labor force participation rate (TPAK), and the provincial minimum wage (UMP) simultaneously and partially on the TPT in Indonesia, and to identify the variables that most dominantly influence the TPT. Secondary data used in the study were obtained from the Central Statistics Agency (BPS) with a total of 15 years of observations. The data collection method was carried out through non-participant observation, while the analysis technique used was multiple linear regression analysis. The findings describe that (1) economic growth, TPAK, and UMP simultaneously influence the TPT in Indonesia; (2) partially, economic growth and UMP influence the TPT; (3) the TPAK does not influence the TPT in Indonesia.

INTRODUCTION

Globalization and advances in information technology have transformed the structure of the labor market through increased competition, shifts in consumption patterns, and the implementation of the 4.0 industrial revolution, which has tightened access to decent work (Simbolon, Karo, & Daffa, 2023). These changes have exacerbated employment issues, significantly impacting the economies of developing countries, including Indonesia, particularly through rising unemployment rates, an indicator of labor market imbalance (Mukaromah, Hasanah, Yansyah, & Noviarita, 2025). High unemployment not only depresses economic performance but also triggers poverty and various social problems (Ishak, 2018). IMF (International Monetary Fund) data shows that Indonesia recorded the highest unemployment

rate among several ASEAN countries, at 4.76 percent in February 2025, reflecting the complexity of unemployment issues in developing countries due to limited job opportunities, high population growth, low productive investment, and social and political dynamics that influence the effectiveness of employment policies.

The Open Unemployment Rate (TPT) signifies the ratio of jobless individuals relative to the entire labor force and is used as a primary indicator for assessing the effectiveness of labor absorption. The reduction in the Open Unemployment Rate (TPT) within Indonesia lately indicates reflects improvements in labor market performance, influenced by dynamic economic growth, workforce involvement levels, and provincial minimum wage policies that influence labor absorption decisions.

In this study, besides the open unemployment rate specifically mentioned, economic growth is also an important variable influencing labor market conditions. Referring to the theory of economic growth and the labor market, increased national output will increase demand for production factors, including labor, thereby reducing the unemployment rate (Rusydan & Wijaya, 2024). According to information obtained from the Central Statistics Agency (BPS), peak economic expansion during 2020 reached 69.48% amid the Covid-19 crisis, which notably influenced rising joblessness. Although economic growth returned to positive levels in subsequent years, the reduction in joblessness levels failed to consistently happen symmetrically, indicating that the economic growth that occurred was not entirely labor-intensive. From the perspective of endogenous growth theory, this condition can occur if growth is driven more by increases in capital and capital-intensive technology, thus not directly increasing labor absorption (Rahayu, Michael, & Amalia, 2018). The second factor, the Labor Force Participation Rate (TPAK), constitutes another vital variable for clarifying labor market trends. TPAK determines the percentage of working-age group that remains financially active, including those currently hired or pursuing employment (Munawir & Saharuddin, 2023). According to Mulyadi, an increase in TPAK ought to perfectly be followed by a growth in the total of workers. If labor force growth is not in line with job availability, this condition will actually lead to increased unemployment due to limited job openings (Sihombing & Yasa, 2025). Data for the Central Statistics Agency (BPS) indicate that Indonesia's LFPR throughout the monitoring timeframe inclined to vary but generally rose, with the highest achievement being 70.63% in 2024, up from 69.48% in the previous year. Although the TPAK has increased, the open unemployment rate has not always shown a corresponding decrease; after declining in 2018, unemployment has risen again in the past three years. The third factor is the Provincial Minimum Wage. The Provincial Minimum Wage (UMP) is the minimum wage standard set by the provincial government as a reference for wage payments for workers in regencies/cities within the region, with the primary goal of protecting the welfare of workers and ensuring a decent standard of living (Nopianti, Santoso, & Abas, 2024). Referring to statistics for the Central Statistics Agency (BPS), the UMP in Indonesia exhibited a rising pattern yearly throughout the monitoring timeframe. Nevertheless, the growth in the UMP was not entirely matched by a drop in joblessness. This suggests that minimum salary hikes rarely possess a straightforward effect on enhancing workforce recruitment, particularly within industries vulnerable to manufacturing expenses.

This study shares similarities with earlier studies by Simbolon et al., (2023), Pasuria & Triwahyuningtyas, (2022), and Sembiring & Sasongko, (2019), it employs the labor force participation rate and the provincial minimum wage to assess their impacts upon the open unemployment rate. However, this study offers a novel element by adding the variable of economic growth, which has not been a primary focus in previous research. The addition of these variables is expected to provide a more comprehensive and specific contribution in understanding the relationship on the labor force participation rate, provincial minimum wages, and economic growth on the open unemployment rate on Indonesia during the 2010–2024 periode.

LITERATURE REVIEW

Open Unemployment Rate Theory

The Open Unemployment Rate (TPT) denotes the proportion of the labor force currently jobless and vigorously pursuing employment relative to the entire labor force within a specific area over a particular timeframe. The unemployed generally include those of working age, those outside of school and usually aged 15 years and above up to retirement age (Charimah & Setiawati, 2024). Practically, unemployment includes those who are not working at all and are trying to find suitable employment. As a labor market indicator, the TPT reflects the efficiency of labor absorption and the level of utilization of human resource potential in the economy (Adelya, Isyandi, & Aulia, 2025).

According to John Maynard Keynes, in *The General Theory of Employment, Interest, and Money* (1936), joblessness results from deficient aggregate demand, not solely by factors of production. According to Keynes, stunted economic growth is caused by low consumption, and this problem cannot be left to free market mechanisms. Lower wages due to excess labor will reduce people's purchasing power, resulting in losses for producers and their inability to absorb more labor. Keynes suggested government intervention to maintain the level of aggregate demand in order to overcome the unemployment problem that cannot be solved solely by market mechanisms (Badria, 2021).

Economic Growth Theory

According to (Sadono Sukirno, 2016) in a study (Gobel, Walewangko, & Siwu, 2021), economic growth represents a development wherein an economy's output capability expands, as demonstrated by a growth in the real national income. In other words, economic growth reflects a country's ability to continuously increase the output of goods and services over time. This growth is not merely a quantitative increase in production, but also encompasses progress across all aspects of the economy, such as increased labor productivity, more effective use of technology, and increased employment opportunities (Lestari, Robiani, & Sukanto, 2023).

The classical theory, first developed by Adam Smith in his book *"An Inquiry into the Nature and Causes of the Wealth of Nations,"* discusses the factors influencing a country's economic development. According to Adam Smith, the implementation of laissez-faire policies, or free market mechanisms, will optimize the level of economic development a society can achieve. Smith also emphasized that the primary factor in development is population growth, and once development is underway, the process will continue cumulatively (Kholimah et al., 2024).

Labor Force Participation Rate Theory

According to (Sukirno, S. 2016) in a study by (Alawiyah Matondang, Fazirah Nasution, Hasanah Hasibuan, & Prabowo Siagian, 2024), the labor force participation rate denotes the ratio of the employment-eligible population inside the workforce, implying individuals performing job duties or hired. This description highlights that labor force involvement is not just labor market attendance but also financial activity, either hired or pursuing jobs. Fundamentally, the labor force participation rate determine proportions of the employment-age demographic engaged in productive and gainful financial activities.

Lewis's theory, as found in a study by (Adelya et al., 2025), states that excess labor is not a problem but an opportunity. In this theory, the excess labor, specifically within the agricultural sector, is considered a labor resource that can be transferred to the industrial sector, thus supporting economic growth. This theory describes the existence of a traditional sector (agriculture) with excess labor with a near-zero margin, and a modern sector (industry) that requires labor with a margin greater than zero.

Provincial Minimum Wage Theory

Referring Article 1 paragraph 30 of Law Number 13 of 2003 concerning Manpower, salaries represent entitlements obtained by employees or staff members rendered in financial terms. Such pay constitutes rewards granted by firms to employees or staff, established and settled according to a job contract, group accord, or relevant statutes and mandates. This remuneration further incorporates benefits for employees or staff plus their households as payment for duties and/or functions executed or destined for execution (Suhadi & Setyowati, 2022).

Malthusian theory, in research (Badria, 2021), views wages in relation to population change. Population is a strategic factor utilized to clarify diverse matters. Wages represent the cost of manpower. Consequently, the pay scale emerges from the balancing of supply and demand. As inhabitants multiply, the employment availability also rises, hence lowering pay scales. Conversely, proportionally, pay scales will rise as inhabitants decline, thus diminishing employment availability.

METHODS

The study focuses primarily on analyzing the influence of Economic Growth, TPAK, and UMP on the Open Unemployment Rate (TPT) in Indonesia. The research was performed in Indonesia seeing that the TPT persists in varying annually and has undergone substantial growth owing to the financial deceleration, particularly during COVID-19, although in recent years it has shown a downward trend. The variables utilized in this research include TPT as the dependent variable (Y), Economic Growth (X1), TPAK (X2), and UMP (X3) as independent variables. This research utilized annual data in time series form for the period 2010–2024 with a total of 15 years of observations. The data utilized is secondary material obtained from the Central Statistics Agency (BPS). The data evaluation method applied is multiple linear regression, using model parameters to establish the impact of every separate factor, both individually and collectively, on the open unemployment rate on Indonesia. The data was processed using the SPSS software application version 27. The multiple linear regression formulaic framework containing the specific structural details below :

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \dots \dots \dots (1)$$

Deskripsi:

Y = Open Unemployment Rate

β_0 = Constant (the value of Y when all X variables are zero)

$\beta_1, \beta_2, \beta_3$ = Regression coefficient of each independent variable

X_1 = Economic growth

X_2 = Labor Force Participation Rate

X_3 = Provincial Minimum Wage

e = Error components or confounding variables

RESULTS

To evaluate the degree to which economic growth, TPAK, and UMP variables contribute to the TPT in Indonesia, this study employed multiple linear regression. Before implementing the regression model, data adequacy was verified through a sequence of evaluations to guarantee that the resulting estimates met the BLUE (Best Linear Unbiased Estimator) principle. The testing phase began with an evaluation of data normality, as seen on Table 1.

Table 1 Normality Test One-Sample Kolmogorov-Smirnov Test

Asymp. Sig. (2-tailed) ^c	.139
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Source: SPSS, data processed 2025

Referring on table 1, it is evident that the unstandardized residual contains an Asympg Sig (2-tailed) score of $0.139 > 0.05$, therefore, the data is stated to be normally distributed.

Table 2 Multicollinearity Test Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	ECONOMIC GROWTH	.743	1.345
	TPAK	.721	1.387
	UMP	.579	1.727

Source: SPSS, data processed 2025

From the findings from the multicollinearity test in Table 2, one may determine that no multicollinearity exists since the Tolerance and VIF metrics of the independent variables satisfy the necessary criteria. The Economic Growth factor shows a Tolerance of 0.743 and a VIF of 1.345, the TPAK element has a Tolerance of 0.721 and a VIF of 1.387, while the Provincial Minimum Wage possesses a Tolerance of 0.579 and a VIF of 1.727. Every Tolerance measure > 0.10 and $VIF < 10.00$.

Table 3 Autocorrelation Test, Determination Coefficient, Coefficient Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.838 ^a	.702	.613	.40731	1.927

Source: SPSS, data processed 2025

Referring on Table 3, one may determine that the DW statistic value of 1.927 is different from the DW table value for $N = 15$ and 3 independent variables (k). The DW table yields a score (DL) of 0.814 and a score (DU) of 1.7501, where $4 - DU = 4 - 1.7501 = 2.249$. The output shows the DW value of 1.927. Because the DW value is derived from DU and $4 - DU$ ($1.7501 < 1.927 < 2.249$), autocorrelation is unlikely.

The R^2 value is 0.702, or 70.2%. This demonstrates that factors X_1 , X_2 , and X_3 affect variable Y by 70.2%, while the leftover 29.8% is impacted by external factors beyond this study's framework. Furthermore, it indicates that R equals 0.838, signifying a strong correlation between the predictor variables specifically Economic Growth, TPAK, and UMP and the outcome variable, the open unemployment rate.

Table 4 Heteroscedasticity Test Correlations

			Economic Growth	TPAK	UMP	Unstandardized Residual
Spearman's rho	Economic Growth	Correlation Coefficient	1.000	.233	-.540*	-.053
		Sig. (2-tailed)	.	.404	.038	.858
		N	15	15	15	15

	TPAK	Correlation Coefficient	.233	1.000	.446	.134
		Sig. (2-tailed)	.404	.	.095	.648
		N	15	15	15	15
	UMP	Correlation Coefficient	-.540*	.446	1.000	.103
		Sig. (2-tailed)	.038	.095	.	.725
		N	15	15	15	15
	Unstandardized Residual	Correlation Coefficient	-.053	.134	.103	1.000
		Sig. (2-tailed)	.858	.648	.725	.
		N	15	15	15	15

Source: SPSS, data processed 2025

Referring on Table 4, the residual value has a sig. tailed (2-tailed) value > 0.05 where each variable is 0.858; 0.648; 0.725. Therefore, the conclusion obtained is that there are no symptoms of heteroscedasticity.

Table 5 Multiple Linear Regression Analysis, T-Test Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.537	6.847		-.078	.939
	Economic Growth	-.271	.063	-.834	-4.276	.002
	TPAK	.120	.106	.238	1.131	.285
	UMP	-8.074E-7	.000	-.851	-3.718	.004

Source: SPSS, data processed 2025

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = -0.537 + (-0.271).x_1 + 0.120.x_2 - 8.074E-7.x_3 + e$$

1. The constant value is -0.537. This specifies that when the variable x_1 , x_2 , and x_3 are 0, the Y variable (Open Unemployment Rate) is -0.537.
2. The regression coefficient figure of -0.271 suggests that each 1% rise in economic growth will reduce the Open Unemployment Rate by 0.271%, provided different factors stay stable. This negative symbol depicts the opposite relationship on economic growth and the Open Unemployment Rate.
3. The regression coefficient figure of 0.120 suggests that each 1% rise in the Open Unemployment Rate will boost the Open Unemployment Rate by 0.120%, provided different factors stay stable. This demonstrates that the growth in the total of individuals entering the labor market has not been fully offset by the availability of jobs.
4. The regression coefficient value of -8.074E-7 indicates that every one-unit increase on the Provincial Minimum Wage (UMP) will reduce the TPT by 8.074E-7%, presuming additional factors stay fixed. This negative mark demonstrates that a rise in the minimum wage can potentially lower the TPT.

Referring to Table 5, partial testing establishes that:

- The test of the effect of economic growth in the TPT has a value of $t_{hitung} > t_{tabel}$ ($-4.276 > 1.796$) and a significance value of $0.002 < 0.05$, indicating that there is a partial effect of economic growth on the TPT at a 5% margin of error.
- The test of the influence of TPAK on TPT has a value of $t_{hitung} < t_{tabel}$ ($1.131 < 1.796$) and a significance value of $0.285 > 0.05$, meaning that partially there is no influence of TPAK on TPT at a 5% error level.
- The test of the influence of UMP on TPT has a value of $t_{hitung} > t_{tabel}$ ($-3.781 > 1.796$) and a sig. value of $0.004 < 0.05$, meaning that partially there is an influence of UMP on TPT at a 5% error level.

Table 6. F Test ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.915	3	1.305	7.866	.005 ^b
	Residual	1.659	10	.166		
	Total	5.574	13			

Sumber: SPSS, data diolah 2025

Referring to table 6, it has the equation $F_{hitung} > F_{tabel}$ ($7.866 > 3.578$) and a sig. value of $0.005 < 0.05$ so that the variables Economic Growth, TPAK, and UMP, collectively impact the factor Y.

DISCUSSION

The Effect of Economic Growth on the Open Unemployment Rate

Data analysis indicates that economic growth impacts the open unemployment rate at a 5% confidence limit, with a significance value of $0.002 (<0.05)$, thereby confirming the hypothesis. A reduction in the open unemployment rate usually aligns with rising economic growth, as shown by the negative regression coefficient. This finding aligns with Okun's Law (Sun'an, Husen, & Yetty, 2025), which explains the negative relationship on economic growth or unemployment, where increased output drives increased labor demand. In the Indonesian context, this condition also aligns with Keynesian theory (Badria, 2021), which states that increased production capacity and expanded labor absorption by producers occur as a findings of increased aggregate demand triggered by economic growth. This finding aligns with Nababan, Waimbo, & Maspaitella, (2023), which determined that economic growth influences the Open Unemployment Rate (TPT).

The Effect of the Labor Force Participation Rate on the Open Unemployment Rate

The analysis indicates that the TPAK factor exerts no impact in the open unemployment rate at a 5% confidence limit, with a significance value of $0.285 (>0.05)$, hence dismissing the hypothesis. This result matches economic principles, which suggest that a rise in the TPAK could potentially decrease the open unemployment rate if supported by sufficient job recruitment. However, in the Indonesian context, the increase in population has not necessarily entailed job formation. This aligns with Keynesian theory (Badria, 2021), which posits that as the total of job hunters grows, pay rates often drop, subsequently lowering public buying capacity. Feeble demand for products and activities emerges as a result of the reduction in spending strength, which in turn impacts producers' losses and limits labor absorption. This finding aligns with that of Rahmawati, Izzati, & Luthfiyyah, (2024), who explained that the TPAK has no effect on the Open Unemployment Rate (TPT).

The Effect of Provincial Minimum Wages on the Open Unemployment Rate

The analysis demonstrates that the Provincial Minimum Wage (UMP) factor impacts the open unemployment rate at a 5% confidence limit, with a significance value of 0.004 (<0.05), thereby validating the hypothesis. The inverse regression coefficient suggests that a rise in the UMP often leads to a lower Open Unemployment Rate (TPT). This finding suggests that establishing a decent minimum wage can improve worker welfare and boost purchasing power. Research (Saputra, Salmah, & Sujadi, 2024) explains that wages that are too low tend to discourage workers from working, potentially increasing unemployment. While adequate wages can increase work motivation and labor productivity. In the Indonesian context, an increase in the UMP can also increase aggregate demand through increased household consumption, which encourages increased production and absorbs more labor. This finding aligns with Keynesian theory (Widiantari, Sahri, & Suriadi, 2024), which states that increased worker income will increase consumption and stimulate economic activity. This finding also aligns with research (Amin, 2016), which posits that the UMP exerts a substantial impact in the open unemployment rate.

The Effect of Economic Growth, Labor Force Participation Rate, and Provincial Minimum Wage on the Open Unemployment Rate

The results of the F test determined that economic growth, the TPAK (Taxable Employment Allowance), and the Provincial Minimum Wage (UMP) simultaneously have a significant effect in the Open Unemployment Rate (TPT) at the 5 percent margin of error, as evidenced by the calculated F-value of 8.284 with a significance level of 0.005 (<0.05). Therefore, H_0 cannot be used, and H_a is appropriate.

This implies that the three predictor factors collectively exert a substantial influence on the Open Unemployment Rate. This framework accounts for 70.2 percent of the Open Unemployment Rate, while the remaining 29.8 percent is due to external factors such as education level, investment, industrial structure, and labor market dynamics indicating that unemployment is complex and requires interconnected economic and labor policies.

CONCLUSION

Referring to the analysis and discussion, it will be concluded that economic growth, the labor force participation rate (TPAK), and the provincial minimum wage (UMP) simultaneously significantly influenced the open unemployment rate in Indonesia during the 2010–2024 period. Partially, the study outcomes suggest that economic growth and the UMP substantially affected the Open Unemployment Rate (TPT), whereas the TPAK exerted no meaningful impact in the Open Unemployment Rate (TPT). This findings demonstrates that large-scale economic shifts and salary regulations were more influential in shaping the open unemployment rate compared to the labor force participation rate throughout the duration on the research.

Referring these results, the government intends to achieve inclusive economic growth through sustainable development by supporting labor-intensive industries while developing human resource capacity to match their job requirements through TPAK expansion. Furthermore, the determination of provincial minimum wage policies needs to be carried out proportionally, taking into account labor productivity, labor market conditions, and business capabilities to minimize negative impacts on labor absorption. Synergy between the government, the business world, and the workforce is essential to creating a sustainable labor market then the open unemployment rate within Indonesia will be reduced effectively in the future.

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