

The Influence of Unemployment Rate and Labor Structure on Economic Growth in West Java for the Period 2019-2024

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Abstract

This study aims to analyze the effect of unemployment rate and workforce structure on economic growth in West Java during the period 2019-2024. The method used is path analysis with secondary data obtained from various official sources. The results of the analysis show that the relationship between unemployment rate (X1) and workforce structure (X2) on economic growth (Y) tends to be weak, with an R-squared value of 2.8%, indicating that the model is only able to explain 2.8% of the variation in economic growth. This study concludes that unemployment rate and workforce structure do not have a significant effect on economic growth in West Java during the study period. Other factors not included in the model are likely to contribute more to economic growth. This finding underscores the importance of considering additional variables and improving research methods in regional economic analysis.

Keywords: *Unemployment Rate, Workforce Structure, Economic Growth, West Java.*



A. INTRODUCTION

Indonesia, with its large population, faces serious challenges in workforce management, especially in terms of high unemployment rates and imbalances in the workforce structure. This condition is a major concern because an imbalanced workforce structure, especially the dominance of the informal sector, can hamper the productivity and innovation needed to drive sustainable economic growth (Todaro & Smith, 2015).

West Java, as the province with the largest population in Indonesia, has a strategic role in supporting the national economy. This region is known as one of the centers of the manufacturing and service industries, thus contributing significantly to the national GDP (Central Bureau of Statistics, 2020). However, the high unemployment rate in West Java is one of the obstacles in maximizing the economic potential of the province. The high unemployment rate not only reflects employment problems but also shows a mismatch between workforce skills and market needs (World Bank, 2021).

In addition, high unemployment is known to have a negative impact on economic growth because it reduces aggregate productivity and people's purchasing power. This indicates that workforce management efforts, including creating better jobs, are important steps in driving economic growth in West Java (Blanchard & Johnson, 2017; Amin & Anwar, 2022; Fitriani & Wahyudi, 2021; Martono & Hidayat,

2023; Yusuf & Pratama, 2022; Rahmawati & Saputra, 2020).

According to the Central Statistics Agency (BPS), the open unemployment rate in West Java released in February 2024, showed that in 2022-2024 the open unemployment rate in West Java Province decreased by 1.44 percent. However, this figure is still above the national average of 4.82 percent. This phenomenon indicates structural problems in the labor market, which not only impact individuals or families, but also the economy as a whole. High unemployment accompanied by inequality in the distribution of labor between sectors can slow economic growth, create social instability, and increase the burden on the public sector.

Table 1 Population Aged 15 Years and Over by Type of Activity in West Java Province, 2022-2024

Type of Activity	Population Aged 15 Years and Over by Type of Activity in West Java Province		
	2022	2023	2024
Population Aged 15 Years and Over	37.424.968	38.052.491	38.426.026
Labor Force	24.818.342	25.399.990	25.875.187
a. Labor Force Participation Rate (%)	66,31	66,75	67,34
b. Working	22.746.226	23.394.824	24.086.585
c. Open Unemployment	2.072.116	2.005.166	1.788.602
d. Open Unemployment Rate (%)	8,35	7,89	6,91
Not in the Labor Force	12.606.626	12.652.501	12.550.839
a. School	3.056.041	3.162.367	2.922.160
b. Taking Care of Household	8.055.358	8.158.003	8.232.868
c. Others	1.495.227	1.332.131	1.395.811
Employment Opportunity Rate	91,65	92,11	93,09

In this context, the structure of the workforce also plays a crucial role (Gujarati & Porter, 2009). The workforce in West Java is still dominated by the informal sector, which is often less productive than the formal sector. In addition, the imbalance between the agricultural, industrial, and service sectors in absorbing labor can create a gap in economic growth between regions in the province. Therefore, it is important to understand how the existing workforce structure can support or, conversely, hinder the economic growth of West Java.

BPS data also shows that West Java's economic growth in the second quarter of 2024 reached 4.95% year-on-year (y-on-y) reflecting strong economic performance, but this condition is still below the national average of 5.05 percent. In addition, this growth is not accompanied by a high unemployment rate, which indicates an imbalance in the distribution of the benefits of economic growth.

In the study of the influence of unemployment rates and workforce structure on economic growth, various previous studies have provided various insights into the relationship between these three variables. In general, most studies indicate that high unemployment and an imbalanced labor structure have a negative impact on economic growth. However, these findings are often influenced by the socio-

economic context and policies implemented in each country or region.

Research by Blanchard & Johnson (2017) highlights that high unemployment can slow down economic growth because it reduces people's purchasing power and labor productivity. In addition, unemployment often reflects a mismatch between labor skills and the needs of the growing market. On the other hand, Todaro & Smith (2015) show that although unemployment has an impact on the economy, in many cases, high unemployment rates do not directly reduce economic growth, but can be an indicator of shifts in certain sectors that take time to adjust.

The labor structure has also been a major focus in economic studies. Sachs & Warner (1995) argue that the imbalance between the formal and informal sectors in the labor structure can be a barrier to productivity and economic growth. The informal sector tends to have lower productivity and is more vulnerable to economic fluctuations, so its impact on economic growth is smaller compared to the more organized and structured formal sector. Barro's (1991) research also found that the labor structure dominated by the informal sector or low-skilled sector can hinder economic growth due to productivity limitations. In the context of developing countries such as Indonesia, the labor structure dominated by the informal sector is often a major obstacle to driving sustainable economic growth.

In Indonesia, several studies confirm that unemployment and labor structure have a significant impact on economic growth. Research by Suryahadi & Sumarto (2003) in Indonesia shows that high unemployment will worsen the quality of life and purchasing power of the community, resulting in lower economic growth. However, several studies also show an imbalance in its impact, depending on the policies implemented, the economic sector, and labor market conditions.

In West Java, which is the province with the largest population in Indonesia, high unemployment rates and a labor structure dominated by the informal sector are major challenges for economic growth. However, compared to previous findings, research that focuses more on the relationship between unemployment rates, labor structure, and economic growth at the provincial level such as in West Java is still relatively limited. This study aims to enrich the literature by exploring in more depth the influence of these two factors on economic growth in West Java, especially in the 2019-2024 period.

Previous studies have provided a solid foundation of understanding the relationship between unemployment, labor force structure, and economic growth, but few have discussed it in depth at the provincial level in Indonesia. In this regard, this study offers a significant contribution by focusing on West Java and a specific time period, providing a clearer picture of labor market dynamics and their impact on the regional economy. The findings of this study are expected to provide new insights for policy makers in formulating more appropriate and effective economic policies in West Java.

This study aims to analyze the influence of unemployment rates and labor force structure on economic growth in West Java. Thus, it is expected to provide

recommendations for more effective economic and employment policies in improving the welfare of the West Java community as a whole.

B. METHOD

This study uses a quantitative approach to examine the effect of unemployment rate and workforce structure on economic growth in West Java. The quantitative approach was chosen because it allows systematic numerical data-based analysis to obtain statistical conclusions (Sekaran, 2003). In addition, this study is an explanatory study that aims to explain the causal relationship between the independent variables (unemployment rate and workforce structure) and the dependent variable (economic growth in West Java).

For the research variables, it is determined by the independent variable (X), namely Unemployment Rate (X1): Percentage of unemployment from the total workforce in West Java, Workforce Structure (X2): Composition of the workforce based on economic sectors, namely the percentage of workers in the primary, secondary, and tertiary sectors. While for the Dependent Variable (Y), namely Economic Growth (Percentage change in Gross Regional Domestic Product (GRDP) in West Java).

Data analysis was carried out using statistical methods to test the relationship between the independent and dependent variables. The analysis steps include:

1. Descriptive Analysis: To understand the characteristics of data on unemployment rates, workforce structure, and economic growth. This includes the mean, minimum, maximum, and standard deviation values for each variable.
2. Classical Assumption Test: Testing the data to meet the regression assumptions, such as the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.
3. Multiple Linear Regression Analysis: Multiple linear regression techniques are used to see the effect of unemployment rates and labor structure on economic growth (Hair et al., 2014; Field, 2013; Kline, 2015).

C. RESULTS AND DISCUSSION

West Java is one of the largest provinces in Indonesia located in the western part of Java Island. Consisting of 27 regencies/cities and the results of the 2020 Population Census showed that the population of West Java was 48.27 million people with a male percentage of 50.7 percent and females 49.23 percent. West Java is also one of the provinces with the largest economy in Indonesia which has high economic dynamics and various industrial sectors. However, the main challenges faced are the high unemployment rate and the structure of the workforce concentrated in certain sectors. This condition can affect the overall economic growth of the region, considering that the availability of optimal labor and good labor absorption are the keys to sustainable economic growth.

High economic growth, but not accompanied by a decrease in the

unemployment rate, often indicates that the growing sectors tend not to absorb much labor. Some of the contributing factors are as follows:

1. Growth of Capital-Intensive Sectors: Sectors such as the manufacturing industry with a high level of automation or technology-based sectors often experience economic growth without requiring much additional labor. These technological and automation efficiency improvements increase output, but do not have a direct impact on employment.
2. Gap Between Workforce Skills and Industry Needs: Growing industries may require certain skills that are not possessed by the majority of the workforce, thus increasing structural unemployment. For example, the growth of the technology sector or creative industries may require specialized skills that are not yet widely mastered by the local workforce.

Then if the unemployment rate remains high even though the economy is growing, this could indicate structural unemployment, which is unemployment caused by a mismatch between the skills of the available workforce and the needs of growing industries. This structural unemployment can occur for several reasons:

1. Limited Education and Training: If relevant education or skills training is lacking, the workforce may not be able to adapt to the needs of dynamic industries, especially in technology or advanced manufacturing.
2. Limited Labor Mobility: Limited mobility, both geographically and by sector, can lead to concentrations of unemployment in areas that do not enjoy the direct impacts of economic growth, such as rural areas with minimal access to industrial centers.

In West Java, high economic growth is concentrated in urban areas or major industrial areas, such as Bandung, Bekasi, or Karawang. These areas have better access to infrastructure, skilled labor, and investment. In contrast, rural or peripheral areas may not feel the direct benefits of this growth, so unemployment in these areas remains high. This can trigger:

1. Economic Inequality: Income inequality between urban and rural areas can increase, which in turn can widen social gaps.
2. Slowdown in Poverty Reduction: Unequal economic growth means that poverty reduction only occurs in certain areas, making poverty alleviation programs less effective.

Table 2 Unemployment Rate, Labor Structure, and Economic Growth in West Java (in percent), 2019-2014

Variable	Years					
	2019	2020	2021	2022	2023	2024
Unemployment Rate (X_1)	7,78	7,71	8,92	8,35	7,89	6,91
Labor Force Structure (X_2)	92,22	92,29	91,08	91,65	92,11	93,09
Economic Growth (Y)	5,68	-2,52	5,02	5,45		4,95

The results of the path analysis show that the relationship between the unemployment rate (X_1) and the workforce structure (X_2) on economic growth (Y) in

West Java during the 2019-2024 period tends to be weak. This is indicated by the R-squared value of 0.028 (2.8%), which indicates that only 2.8% of the variation in economic growth can be explained by the model. The adjusted R-squared of -0.215 further confirms that this model is not suitable for the data used, because its value indicates that the addition of variables actually worsens the quality of the model.

The path coefficient shows that the unemployment rate has a positive effect on economic growth ($\beta = 0.7658$), but this effect is not statistically significant (p-value = 0.738). Conversely, the workforce structure has a negative effect on economic growth ($\beta = -0.0233$), which is also not statistically significant (p-value = 0.906). In other words, changes in the unemployment rate or workforce structure do not have a significant impact on economic growth in the context of this study.

The F-statistic result of 0.1155 with a p-value of 0.751 indicates that the overall model is not significant at the 95% confidence level ($\alpha = 0.05$). This indicates that the independent variables used in this study are not strong enough to explain variations in economic growth.

The Durbin-Watson value of 2.268 indicates that there is no significant autocorrelation in the model, which means that the residuals in the model are not correlated with each other. However, the presence of high multicollinearity (very high Condition Number) indicates that the independent variables have a very strong relationship with each other. This multicollinearity reduces the reliability of the regression coefficient estimate, thereby increasing the possibility of bias in the interpretation of the results.

These results indicate that the unemployment rate and workforce structure are not the main determinants of economic growth in West Java during the study period. Other factors not included in the model, such as investment, fiscal and monetary policy, infrastructure, or technological innovation, are likely to have a greater role in influencing economic growth (Sachs & Warner, 1995). In addition, high multicollinearity among the independent variables indicates a problem in variable selection, leading to inaccurate interpretation. This study also highlights the need to use a more complex model or include additional relevant variables to provide a more comprehensive picture of the factors influencing economic growth. In addition, a high p-value indicates that the influence of the independent variables is not significant, thus indicating the need for further studies with different approaches, such as panel analysis or longer time series data. In the context of policy, these findings suggest that efforts to increase economic growth cannot only be focused on the unemployment rate and workforce structure. A more holistic approach, including strengthening sectoral and regional policies, is needed to encourage more sustainable economic growth in West Java.

D. CONCLUSION

Based on the results of the path analysis, it is concluded that the relationship

between the two independent variables, namely the unemployment rate and the labor force structure, on economic growth tends to be weak and statistically insignificant. The R-squared value of 0.028 indicates that the model is only able to explain 2.8% of the variation in economic growth, while the adjusted R-squared of -0.215 indicates that the model is not suitable for the data used.

In detail, the unemployment rate has an insignificant positive effect ($\beta = 0.7658$; p-value = 0.738), while the labor force structure has a negative effect that is also insignificant ($\beta = -0.0233$; p-value = 0.906). Overall, the F-statistic results (F-statistic = 0.1155; p-value = 0.751) indicate that the model is not significant at the 95% confidence level. The high multicollinearity problem in this model also indicates a strong correlation between the independent variables, which has an impact on the reliability of the coefficient estimates.

These results indicate that the unemployment rate and workforce structure are not the main factors influencing economic growth in West Java during the study period. Other factors not covered in the model, such as investment, government policy, and technological innovation, are likely to play a greater role in driving economic growth. Therefore, further research is needed with a more comprehensive model to understand the factors influencing economic growth in more depth. This study also provides implications for policy makers that the focus on increasing economic growth must be more holistic, including policies that support the development of productive sectors, job creation, and improving the quality of human resources. This is important to encourage sustainable and inclusive economic growth in West Java.

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