



DOI <https://doi.org/10.38035/dijemss.v7i6>
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Estimated Employment Opportunities and Labor Productivity in Central Java Province in 2025-2029

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Abstract: This study aims to identify labor trends in Central Java for the period 2014–2024 and project its conditions in 2025–2029, including the number of job opportunities and labor force productivity. The research uses a quantitative method with secondary data from Sakernas, RPJMD, the technocratic draft of the 2025–2029 RPJMN, and RPD Central Java, which is analyzed through the stages of compilation, cleaning, statistical analysis, visualization, and interpretation. The working-age population and labor force in Central Java continue to increase, with the open unemployment rate likely to decline (except in 2024), and this upward trend is projected to continue until 2029. The highest job opportunity elasticity is found in the corporate services sector, and the lowest in the mining and quarrying sector, but based on the projected number of job opportunities, the agriculture, forestry, and fisheries sectors are expected to be the highest, while mining remains the lowest. Labor productivity is projected to be highest in the agriculture, forestry, and fisheries sectors, as well as lowest in the mining and quarrying sectors.

Keywords: Labor Elasticity, Labor Productivity, Economic Growth, Economic Policy

INTRODUCTION

Indonesia, as one of the developing countries, is experiencing quite complex employment problems. This condition is influenced by several factors such as economic, demographic, and structural conditions. After the COVID-19 pandemic, Indonesia showed a positive economic growth trend, but employment challenges remain a major concern. The open unemployment rate in Indonesia as of May 2025 still stands at 4.76%, although the trend of labor force participation rates tends to increase. The dynamics of working conditions in Indonesia are greatly influenced by labor supply and demand factors. The supply dimension is strongly influenced by the education and skill level of the workforce and explains the findings (BPS, 2025) (Noble, 2024) that although Indonesia's economic growth began to improve in 2022-2023, the challenge of increasing the working-age population due to the demographic bonus period must still be accompanied by appropriate and responsive labor policies to the digital sector. Muhyiddin et al. (2024)

Central Java Province is a region in Indonesia with a population of 37,892,283 people in 2024 (BPS Central Java, 2024d) . As of August 2023, the number of workers in Central Java reached 21.07 million people. The workforce is part of the working-age population, both those who have jobs and those who are preparing for a new job/business. The Working Age Population (PUK) is an individual who enters the age range of more than 15 years. This group is considered to be in the productive age range that is demographically considered capable of working and contributing to the economy, both macro and micro. The labor force consists of 2 groups, namely people who have jobs and people who are unemployed. Logically, a region's economy will grow

if the proportion of the working population is greater than the number of unemployed. (Adriyanto et al., 2020) (Cruz & Ahmed, 2018)

The size of the composition of the labor force is indicated by the percentage of the Labor Force Participation Rate. In 2023, TPAK in Central Java reached 71.72%, (BPS Central Java, 2024b). This value shows that 71.72% of the total labor force in Central Java in 2023 is actively working or looking for work, while the remaining 28.28% is a working-age population that is not included in the labor force. The Labor Force Participation Rate in Central Java is actually quite high, but at 71.72%, not all of them are actively working. The Central Java Statistics Agency noted that in 2023, the Open Unemployment Rate (TPT) in this region was still at 5.24% and will fall to 4.39% in February 2024. (BPS Central Java, 2024c)

The classic problem of employment, namely unemployment in Central Java, still occurs. This condition is caused by many factors, ranging from social conditions to regional economies. Vacation (2022) In his research, he found the fact that simultaneously the factors of inflation, economic growth, and the number of unemployed in the previous period affected the open unemployment rate in Central Java in the period 1989-2016. This condition is exacerbated by the fact that Central Java is one of the provinces in Indonesia that has officially entered a period of population aging.

From a macroeconomic perspective, the rate of labor absorption is influenced by the Gross Regional Domestic Product (GDP) produced. Research explains that GDP has a positive and significant influence on labor absorption. Vacation (2022), Ali et al. (2020). The greater the absorption of labor in a region, the open unemployment rate in that region will decrease. Conversely, if a lot of labor is not absorbed in jobs, the open unemployment rate (TPT) in the region will increase. Central Java Province in 2024 will have an open unemployment rate of 4.39%. Although it tends to be low, the government still needs to anticipate changes in socio-economic conditions in the future.

A comparison between the growth rate of the working population and the growth rate of GDP in a region can be used to estimate the main economic sectors in Central Java. One of the methods that can be used to estimate labor absorption in Central Java and also its productivity is the job opportunity elasticity method. Job opportunity elasticity is the ratio between the growth of labor absorption to economic growth in a region in a given period of time. (Haider et al., 2023) The higher the elasticity value, the higher the rate of labor absorption in the region. On the other hand, the smaller the value, the more it can be said that labor absorption is inelastic.

So far, research on employment in Indonesia is more associative-quantitative. Employment studies in Central Java highlight the influence of macroeconomic variables as independent variables on labor absorption or open unemployment rates. This study, Purnomo (2021) for example, tries to find a pattern of relationships between inflation, the regional minimum wage, and the Human Development Index (HDI) related to job availability in Central Java. Another study that tried to analyze Central Java's employment trends for the period 2014-2017 using descriptive statistical tests found that formal employment is still not enough to absorb the workforce, while the service and finance sectors play a role in increasing employment growth. Subanti et al. (2019)

Several other studies have linked employment problems in Central Java to regional poverty conditions. For example, a study of and tried to find the effect of the unemployment rate along with several other independent variables, on poverty in Central Java. As a result, regional employment problems in the form of open unemployment rates and regional minimum wages have a significant impact on poverty in the region. Puspita (2015), Shirley (2021), Elok & Wardono (2020), Hutabarat et al. (2023)

The analysis of Central Java's employment trends after the COVID-19 pandemic has not been widely researched. In fact, an in-depth study is needed to uncover employment trends as well as labor needs in Central Java. Therefore, this study aims to analyze working conditions in Central Java over the last 10-year period, starting from 2014-2024. Then based on the trends that occurred over a 10-year period, the researcher prepared a projection of job opportunities in 2025-2029 with a combination of scenarios involving government policy plans and economic growth indicators. In addition, the researcher will also estimate labor productivity in accordance with all major economic sectors in Central Java in the 2025-2029 period.

This study seeks to focus on the relationship between regional economic growth as reflected in GDP and job opportunities that can be provided in 2025-2029 in accordance with the period of the Central Java Regional Intermediate Development Plan (RPJMD). This research is expected to

provide empirical input to the Central Java Regional Government and employment planners. In addition, the results of this study are expected to enrich the scientific literature on the elasticity of job opportunities in the context of regions in Indonesia.

METHODS

The research approach used to answer this problem is quantitative with a predictive type of research. The quantitative research approach is characterized by the use of data in the form of numbers to find answers to research questions, while the type of research is predictive. It can be used to process large amounts of data to identify patterns that are not visible to traditional type analysis. Through predictive quantitative research mechanisms, researchers can conduct more precise, accurate, and reliable prediction analysis. (Scrape et al., 2025), Harahap et al. (2024)

The type of data used is secondary data obtained from various official publications on employment from BPS Indonesia, BPS Central Java Province, as well as from Bappenas (National Planning Agency) and also from Bappeda Central Java. The data required in this study was taken through documentation techniques. The data sources used include the 2020 Population Census Projection, the National Labor Force Survey (Sakernas), GDP (according to 2010 constant prices), the 2025-2029 RPJMN Technocratic Draft, the Central Java RPJMD 2025-2029 document, and the Central Java Provincial RPD. Data is collected, and objective measurements are carried out by numerical tests as needed.

The data that has been collected is then processed and analyzed using exploration techniques. Exploratory data analysis according to Leinhardt and Leinhardt (1980) is a research stage to recognize and understand datasets. The analysis of exploratory data in this study is useful for implementing the critical process of finding patterns and examining assumptions with the help of statistics and graphical representations. In this technique, the data will go through a series of analyses ranging from data collection, data preparation, data cleaning, statistical analysis, data visualization, to interpretation of results.

RESULTS AND DISCUSSION

Working Conditions of Central Java in 2010-2024

Central Java is a province with a working-age population of 21.91 million people in 2024. (BPS Central Java, 2024c) Of the total working-age population, 20.86 million people are workers and 1.05 million people are unemployed.

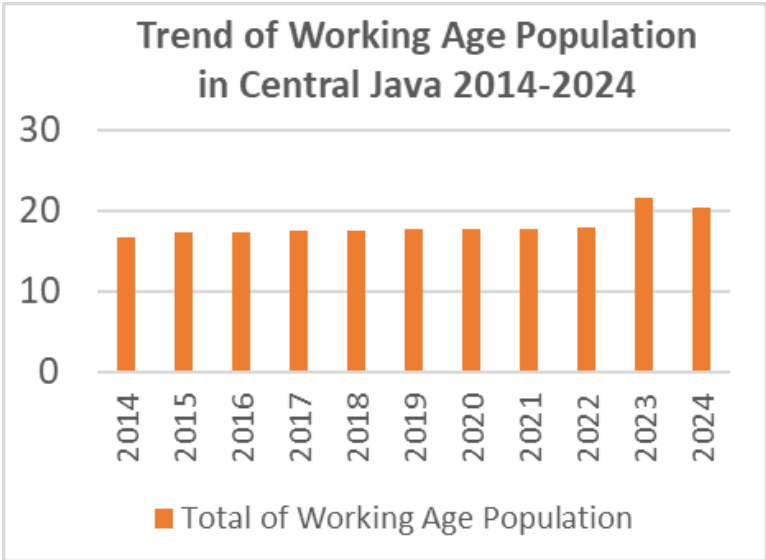


Figure 1. Trends in the number of working-age population in Central Java in 2014-2024

Based on figure 1, it can be seen that the trend of the number of working-age population in Central Java in general continues to increase. The highest increase in the working-age population in Central Java over the past 10 years occurred in 2023, but then in 2024 there was a small decrease in PUK to reach 20.41 million people. The increase in the number of working-age population (PUK) is a challenge that cannot be avoided by Central Java. Research in low-economic countries such as the one conducted by BY shows that the growth of PUK is able to increase the number of immigrants in the world job market, worsening the unemployment rate if the government cannot

continue to create new job vacancies. On the other hand, research in developed countries found that positive growth in the number of PUK can have a positive impact on economic growth. In fact, this demographic bonus period is able to account for 15% of economic growth in developed countries.Oshora et al. (2021) , Taguchi & Latjin (2023).

The Central Java region, which is experiencing a population aging of up to 13.5% in 2023 - Stuart O'Neill (2024a) , is also a challenge for this region. This challenge has been demonstrated in a study whose results show that in (developing) South Asian countries, the decline in the proportion of PUK due to population aging tends to have a negative impact on the country's economic growth. and also shows that even in developed countries, population aging actually decreases productivity and increases dependency ratios. Ultimately, an aging population is able to squeeze resources and potentially hinder economic growth. The report also predicts that a 10% increase in the elderly population aged 60+ will be able to reduce GDP by 5.5%. Abeywardhana (2019) Van Der Gaag & de Beer (2015),Maestas et al. (2023) ,Maestas et al. (2023).

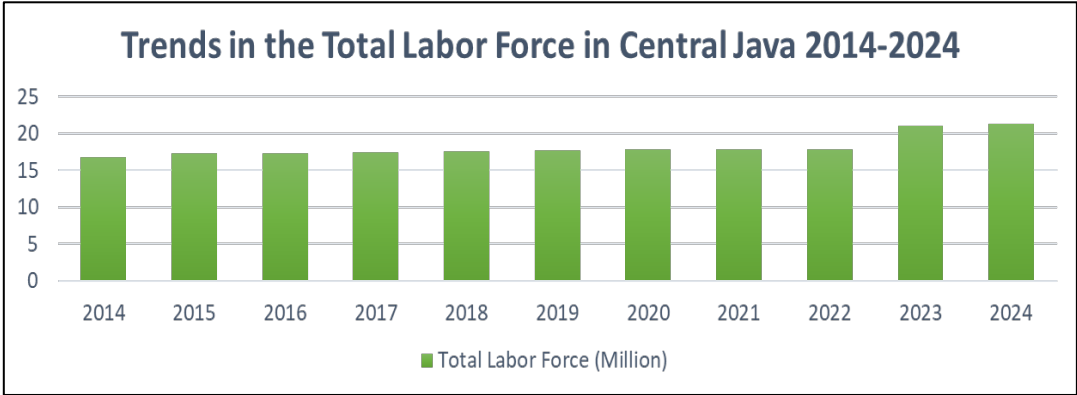


Figure 2. Total labor force trends in Central Java 2014-2024

Compared to the increasing number of working-age population, data from BPS also shows that the number of workers in Central Java also continues to increase. Based on figure 2 above, it can be seen that from 2014 to 2024, the number of workers in Central Java tends to increase, albeit slowly. The highest increase occurred in 2022 to 2023. In the period 2023 to 2024, the number of workers in Central Java only increased slightly from 21.07 million to 21.35 million people. Based on this data, during the 2023-2024 period, Central Java experienced an increase in the labor force of 280 thousand people.

The labor force is made up of a working and unemployed population. To find out the number of people in Central Java who work, it is possible to use Labor Force Participation Rate (TPAK) data. The percentage of Central Java residents who work in the 2014-2024 period can be seen in the following table:

Table 1. Labor Force Participation Rate in Central Java in 2014-2024

Year	Labour force participation rate (TPAK)
2014	70.5%
2015	70.8%
2016	71.0%
2017	71.2%
2018	71.4%
2019	71.6%
2020	71.7%
2021	71.8%
2022	71.9%
2023	72.0%

Year	Labour force participation rate (TPAK)
2024	72.2%

Central Java's TPAK over the past 10 years has continued to increase. BPS data shows that TPAK has increased from 70.5% in 2014 to 72.2% in 2024. This means that in 2014 the number of people working in Central Java reached 11.81 million out of 16.75 million workers. By 2024, the total working population will reach 15.41 million workers. If you look at the data, TPAK has actually increased albeit slowly, but the number of people working is still lower than in 2014.

A decrease in the number of workers usually also has an impact on increasing the number of open unemployment in a region. The Open Unemployment Rate (TPT) in Central Java is a percentage of the number of unemployed workers.

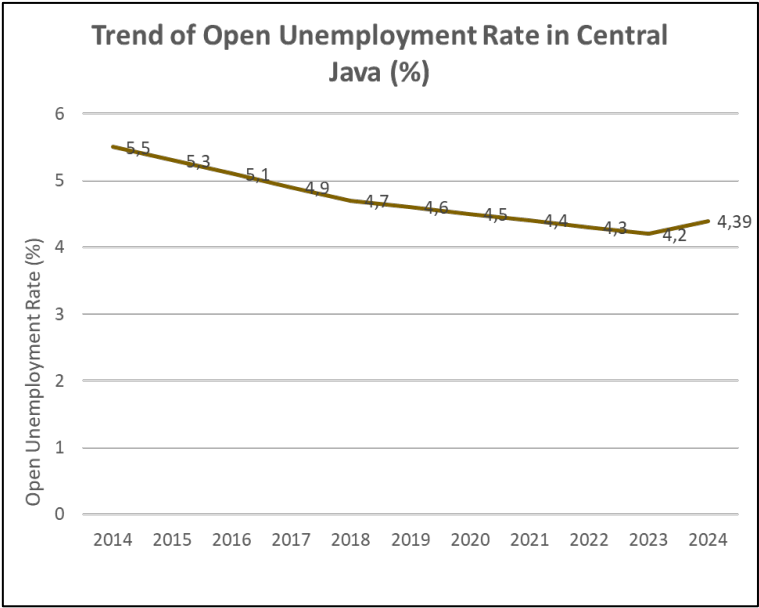


Figure 3. Trend of open employment rate in Central Java (%)

Over the past 10 years, the Open Unemployment Rate (TPT) in Central Java has tended to decline. This can be seen from the image above where the graph shows a decrease in the percentage of Central Java residents who are not working over the past 10 years. In 2014, BPS data showed that about 5.5% of the workforce in Central Java was unemployed and could not be absorbed into employment. The problem of reducing unemployment in Indonesia, not only in Central Java, is still one of the focus of development in Indonesia. The government must reduce TPT in all Indonesian provinces, including Central Java with diverse TPT gaps. Economic growth and also the minimum wage have succeeded in significantly reducing TPT in Indonesia. (Marliana, 2022)

Estimated Working Conditions in Central Java in 2025-2029

After knowing the working conditions in Central Java Province over the past 10 years, the researchers can estimate the working conditions in Central Java in the coming period, starting from 2025-2029. The technique of forecasting working conditions in Central Java used in this study consists of 2 stages. The first stage is to estimate the future Labor Force Participation Rate using the regression method. Then from the value of TPAK, researchers can project an estimate of the number of workers in the future.

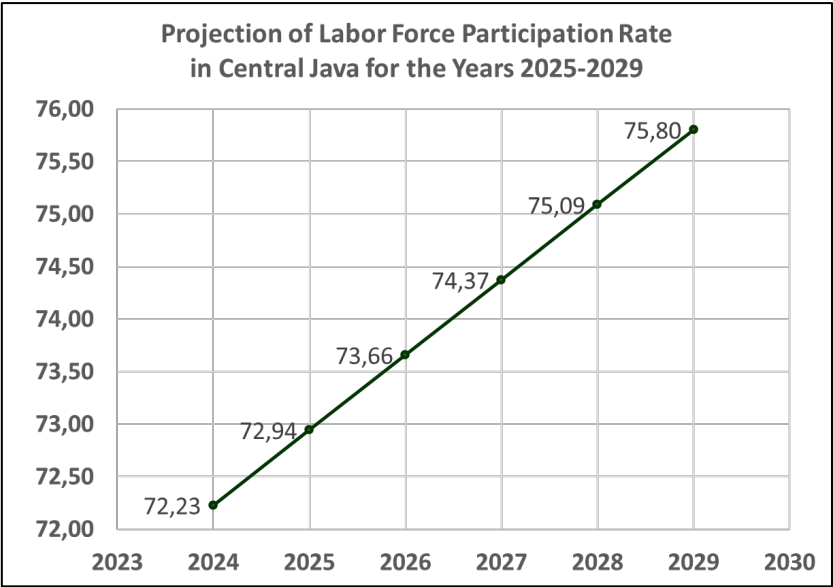


Figure 4. Estimated participation rate of the Central Java labor force in 2025-2029.

The results of the regression calculation show that TPAK in Central Java will continue to increase. With data for the last 5 years, namely 2019-2024, the regression results show that TPAK can continue to increase significantly. This condition will start in 2024 with a TPAK value of 72.23% and is expected to continue to increase significantly until it reaches 75.80% in 2029.

This condition is actually a good indicator in the world of employment, because the majority of Central Java residents of working age are expected to work or look for a job. Meanwhile, the percentage of the population that is not in the labor force is expected to continue to decline until it reaches only 24.2% by 2029. This condition shows that in the future, more and more working-age residents in Central Java will join the workforce. Non-Labor Force residents are those who do not work under various conditions, such as attending school, college, taking care of the household, or in conditions that make it difficult to get a job. However, if the TPAK is not expected to be higher until 2029, in line with the expansion of job opportunities, it will actually increase the percentage of the open unemployment rate.

Table 2. Estimated number of Central Java workforce in 2025-2029

Year	Estimated Number of Working-Age Population	Estimated of Labor Force Participation Rate (%)	Total fo Labor Force Estimates
2024	29.653.010	72,23	21.418.073
2025	29.979.070	72,94	21.867.933
2026	30.294.450	73,66	22.314.589
2027	30.599.270	74,37	22.757.901
2028	30.893.680	75,09	23.197.755
2029	31.178.560	75,80	23.634.596

The number of workers in Central Java is also expected to continue to increase. This condition occurs because the number of Working Age Population (PUK) in Central Java continues to increase until 2029. Based on data from Indonesia's Population Projection as a result of the 2020 Long Form Census, it is estimated that the number of working-age population will increase from 29.653 million people in 2024 to 31.178 million people in 2029. If TPAK continues to increase to 75.80% by 2029, the number of workers is expected to reach 23,634,596 people. For 5 years from 2024 to 2029, it is estimated that the number of workers in Central Java will increase by 2,216,523 people.

The predicted increase in the number of Central Java's workforce is in line with research that found that the demographic bonus in Indonesia as a whole has given rise to the dominance of the PUK. The increase in the number of workers is supported by population growth, but will lead to an increase in TPT if the Central Java government is unable to keep up with job creation. The increase in the number of workers in the era of Indonesia's demographic bonus is actually also able

to provide opportunities to increase economic growth, one of the steps is to improve the quality of workers through formal education and vocational training. (Muhyiddin et al., 2024) (Swastika, 2024), (Muhyiddin, 2023)

Projection of Elasticity of Labor Opportunities and Productivity in Central Java Province 2024-2029

The elasticity of job opportunities in a region is influenced by political policies taken by the government (Neifar, 2024). The elasticity of job opportunities can describe the comparison of the number of job opportunities that a region can offer if there is economic growth at a certain level. In this case, the economic growth used as the basis for calculating the elasticity of job opportunities is the Gross Regional Domestic Product (GDP).

The elasticity of employment opportunities compares the growth rate of the number of people employed in the past with the growth rate of GDP in the same period. In this study, the growth rate of the working population and GDP was taken in 2019-2023. To find the value of the growth rate, the geometric growth rate formula is used. The elasticity of job opportunities is calculated based on each business sector that is officially classified by BPS Indonesia. To date, the business sector is divided into 14 main sectors with the following codes:

Table 3. Elasticity of Central Java Job Opportunities in 2019-2023

Key Business Sectors	Labor Growth Rate (2019-2023)	Gross Regional Domestic Product Levels (2019-2023)	Labor Elasticity	Categories
A	2,927	1,305	2,24	Elastic
B	2,273	-0,274	-8,30	Negative Elasticity
C	1,663	1,302	1,28	Elastic
F	3,016	2,214	1,36	Elastic
G	2,243	2,196	1,02	Elastic
H	1,396	5,490	0,25	Positive Elasticity
I	7,732	4,870	1,59	Elastic
K	-0,387	1,290	-0,30	Negative Elasticity
M,N	5,756	1,717	3,35	Elastic
O	-2,481	0,717	-3,46	Negative Elasticity
P	2,378	1,449	1,64	Elastic
Q	3,436	3,292	1,04	Elastic
R,S,T,U	4,249	2,117	2,01	Elastic
D,E,J,L	2,570	5,723	0,45	Positive Elasticity

Based on the table, it can be seen that the pattern of elasticity of job opportunities in Central Java is not the same in every sector. The highest elasticity of job opportunities in Central Java is found in the sector (M, N), namely corporate services. Although based on the results of this calculation, the highest growth rate of the working population is obtained by (I) the Accommodation, Food and Beverage Provider sector, while the highest GDP rate is in the other sectors (D, E, J, L) of the other categories.

There are sectors that actually have a fairly high elasticity of job opportunities, but there are actually some sectors that have a negative elasticity of job opportunities or called negative inelasticity. This is because in the 2019-2023 period, one of the levels of the working population and the level of GDP is negative. Based on the image above, it can be seen that of the 14 business sectors in Central Java, there are 2 business sectors with negative job opportunity elasticity values, namely in the code sector (B) Mining and mining and (O) Government Administration, Defense, and Compulsory Social Security.

Negative inelasticity in several sectors in Central Java shows that every 1% of economic growth actually reduces job opportunities. Sectors H (Transportation and warehousing) and DEJL (other sectors) show positive elasticity values in Central Java. This means that whenever there is a 1% increase in GDP in sectors H AND D, E, J, L, job opportunities cannot increase by 1%. These

two conditions, both negative inelasticity and positive inelasticity, both cause potential unemployment growth in Central Java. Unemployment growth can be interpreted as a phenomenon in which the economy grows rapidly, but is not followed by an increase in job opportunities. Patterns of unemployment growth due to job inelasticity occur in developing countries, where GDP growth is high but can only increase employment slightly. (Dr. Satyam Pincha, 2023)

Estimated Job Opportunities in Central Java in 2025-2029

Job opportunities in Central Java for the next 5 years, namely 2025-2029, are projected based on 3 scenarios, namely based on past economic growth trends, economic growth targets in the Central Java RPJMD, and Java Island economic growth targets in this document. Economic growth has an important role in the growth of job opportunities. In the theory of the elasticity of job opportunities, the only factor that can be seen to affect the number of job opportunities that can be provided in a region is economic growth. Presidential Regulation Number 12 of 2025 concerning the National Medium-Term Development Plan for 2025-2029

With a growth rate of 3.27% per year. The GDP growth rate is then projected as the estimated value of GDP in 2024-2029 which is predicted to increase starting from 5.14% (2024), 5.31% (2025), 5.48% (2026), 5.66% (2027), and 6.04 (2029). The value of the projected economic growth rate is then used to project job opportunities in Central Java in the 2025-2029 period.

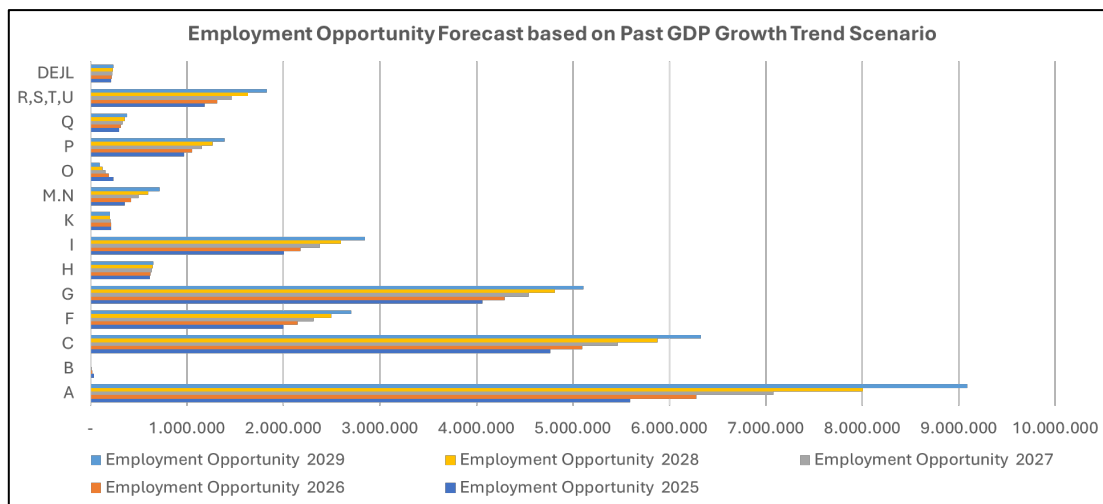


Figure 6. Estimated Job Opportunities based on Previous GDP Growth Trend Scenarios

Figure 6 is the result of projections of job opportunities based on the trend of GDP growth rates from 2019-2023. The graph shows that throughout 2025-2029, sector A will be the sector with the highest number of job opportunities in Central Java. Meanwhile, the lowest job opportunities are in business sector B, namely mining and mining. Other dominant sectors that are expected to be able to provide the greatest job opportunities are the code C sector (processing industry), sector G (wholesale trade, retail, repair, and maintenance of cars and motorcycles), sector I, RSTU sector, and sector P.

Then in scenario 2, the researcher uses the economic growth rate set out in the Central Java Province Medium-Term Development Plan document for 2025-2029. Economic growth based on the Central Java RPJMD target 2025-2029 is taken from the economic growth range set by the government.

Based on the calculation of the median economic growth from the Central Java RPJMD target, the economic growth rate values of 5.3% (2025), 5.48% (2026), 5.65% (2027), 5.83% (2028), and 6% (2029) were obtained. After the median economic growth target is determined, the projected job opportunities that can be provided in Central Java can be seen in the following graph:

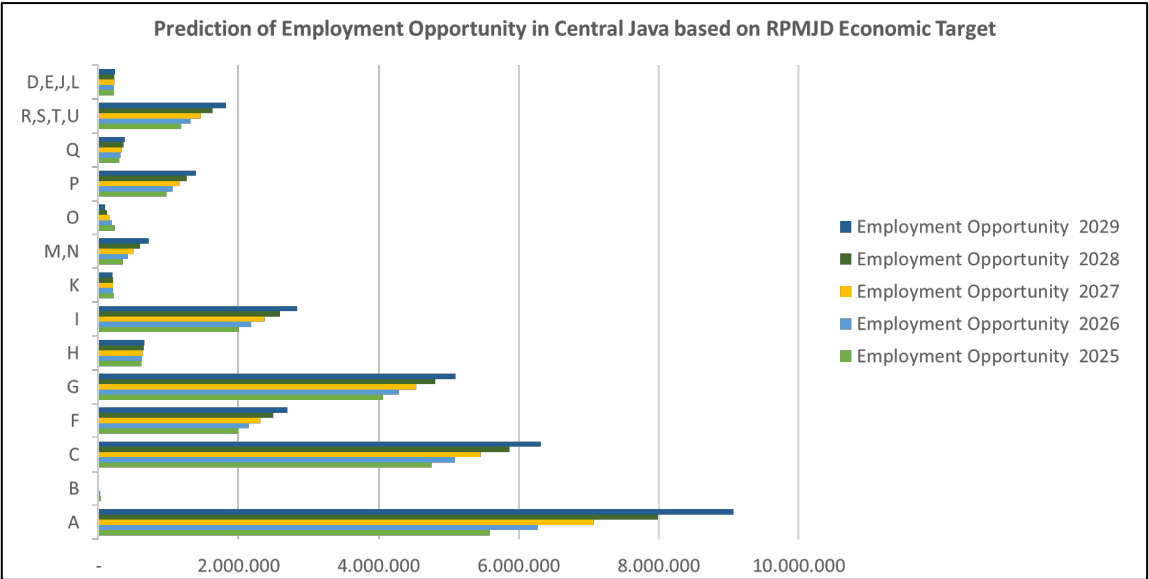


Figure 7. Prediction of Job Opportunities in Central Java Based on RPJMD Economic Targets (Source: (Bappeda Central Java, 2024)

Based on the image above, it can be seen that in the 5-year period, namely 2025-2029, it is estimated that sector A (agriculture, forestry, and fisheries) will actually be the largest contributor to job opportunities in Central Java. This sector is able to contribute 5,588,049 job opportunities in 2025 and continues to increase until it reaches 9,068,908 job opportunities by the end of the 2029 period. The second sector that provides the largest job opportunities in Central Java is estimated to come from the processing industry with 4,458,361 job opportunities in 2025 and continue to increase to 6,316,743 job opportunities in 2029. Meanwhile, sector B mining and mining is a minority contributor to job opportunities in Central Java and is expected to continue to decline from 66,889 job opportunities in 2025 to only around 2,822 job opportunities.

The third scenario is the calculation of estimated job opportunities based on the economic targets announced in the 2025-2029 Indonesian Technocratic RPJMN document. In the Technocratic RPJMN document, the economic growth target is determined based on the dominant business sector in Indonesia with a national target scale. The highest growth targets are set in the Transportation and warehousing sector with an economic growth rate of between 7.4% (2025) and 8.6% (2029). Meanwhile, the sector with the lowest growth target is A. agriculture, forestry, and fisheries with an economic growth rate between 3.9% (2025) and 4% (2029).

After the economic growth rate is determined, the job opportunities that Central Java is expected to provide in 2025-2029 can be seen in the following graph:

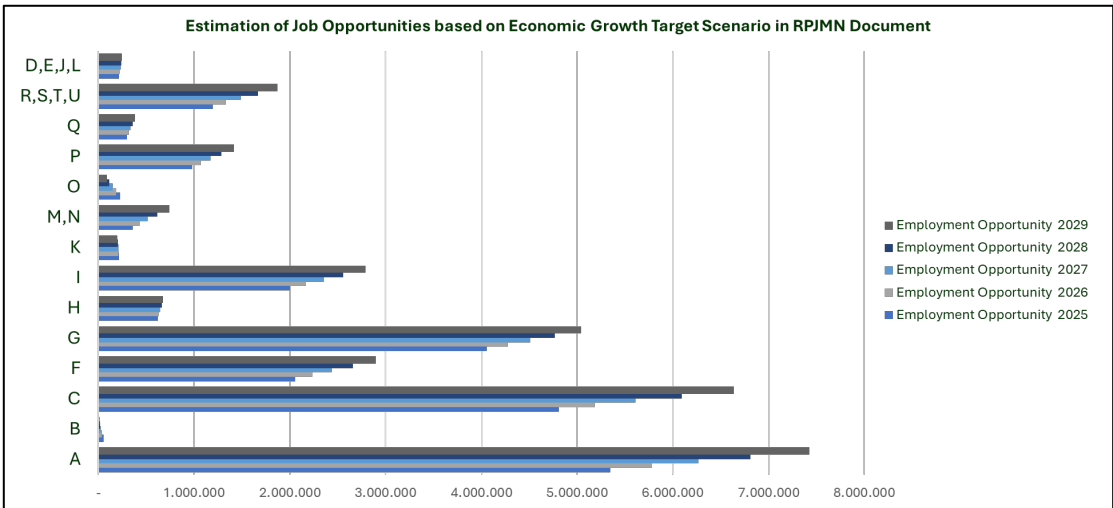


Figure 8. Estimated Job Opportunities based on the Economic Growth Target Scenario in the RPJMN Document.

Figure 8 shows that throughout 2025-2029, the most dominant business sector that provides job opportunities in Central Java is the economic sector, albeit with the lowest predicted economic

growth rate among the other 14 sectors. Then the business sector C. The processing industry is also predicted to provide large job opportunities, reaching 6,635,465 job opportunities by 2029. Like the other two scenarios, the mining and mining sector is expected to be inelastic and job opportunities continue to decline from 53,382 (2025) to only 10,509 (2029). In fact, the mining and mining sector is expected to experience an economic growth rate of between 3.85% - 4.1% during the period 2025-2029.

Central Java Labor Productivity Projection 2024-2029

In this study, the estimated labor productivity by business sector is determined based on 3 scenarios, namely using past GDP growth rate trends, economic growth targets in the Central Java RPJMD document, and the Indonesian RPJMN Technocratic Design Document for 2025-2029. Labor productivity is calculated based on the estimated amount of GDP in Central Java in 2025-2029 and the estimated job opportunities that can be provided. The total GDP according to the respective business sector divided by the employment opportunities that can be provided becomes the basis for a large amount of labor productivity according to the business sector for 1 year. Labor productivity is an illustration of how much economic output (GDP) can be generated by 1 worker for 1 year in one particular business sector

Based on the results of calculations from 3 scenarios, namely the economic growth target scenario in the Central Java RPJMD, the Indonesian Technocratic RPJMN, and the economic growth trend in the past, it turns out that there is an interesting pattern where these three scenarios show similar results. Each scenario predicts that the business sector with the highest productivity in 2025-2029 in Central Java will be sector B. Mining and mining. In fact, the productivity value of the mining and mining sector based on past economic growth trends will reach Rp. 888,548,447.00 by 2029. Predictions from the RPJMD economic target scenario also show that the productivity of the mining and mining sector reaches Rp. 868,643,174.00 in 2029, up from Rp. 52,318,611.00 in 2025.

Meanwhile, in the economic growth scenario of the Indonesian RPJMN, the mining and mining sectors also rank first which is estimated to contribute the highest productivity. Its value is estimated to increase from Rp. 35,815,818.00 in 2025 to Rp. 213,033,043.00 in 2029. According to this scenario, other key sectors worth counting for productivity are the DEJL sector which includes the procurement of electricity, gas, steam/hot water and cold air, water treatment, waste, waste recovery, remediation activities, information and communication, and property. The value of labor productivity is expected to continue to increase starting from Rp. 41,318,421.00 in 2025 to Rp 48,229,918.00 in 2029.

The sectors that are predicted to provide the lowest labor productivity based on 3 scenarios turned out to be the same, namely the M, N Corporate Services sectors. Labor productivity in the Corporate Services sector will range from Rp. 1,121,238.00 in 2025 based on the RPJMN economic growth scenario and will continue to decline to Rp. 684,610.00 in 2029.

An interesting pattern can be seen from the comparison of job opportunities and labor productivity in Central Java. Business sectors that are expected to provide high employment opportunities in Central Java in 2025-2029, such as (A) agriculture, forestry, and fisheries, actually have low labor productivity. On the other hand, business sectors such as (B) mining and mining are predicted to provide very low job opportunities for the people of Central Java, but their productivity is very high in 3 economic growth scenarios at once.

CONCLUSION

The number of working-age population, labor force participation rate, and labor force in Central Java have continued to increase since 2014-2024, while the trend of the open unemployment rate tends to decrease during 2014-2023, but will increase by 0.19% in 2024. The 2025-2029 TPAK in Central Java is expected to continue to increase to 75.80%. The number of workers is also expected to increase to 23,634,596 people by 2029. The elasticity of job opportunities in Central Java is highest in the corporate services sector and lowest (inelastic) in the mining and mining sector. The highest job opportunities based on 3 economic growth scenarios are estimated to be filled by business sectors (A) agriculture, forestry, and fisheries. Meanwhile, the lowest job opportunities are in the mining and mining sector (B). There are several business sectors that are not elastic, namely (B) mining and mining and (O) Government Administration, Defense, and Compulsory Social Security. Labor productivity based on 3 economic growth

scenarios is expected to be dominated by sector (B) mining and mining. The corporate services sector is estimated to have the lowest labor productivity in Central Java in 2025-2029.

Confession

This research is funded by RKAT PTNBH Universitas Sebelas Maret for the Fiscal Year 2024 through the research scheme "Research Group Grant Research (HGR-UNS Research) B with Research Assignment Agreement Number: 194.2/UN27.22/PT.01.03/2024".

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