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ANALYSIS OF THE IMPACT OF THE UNEMPLOYMENT RATE ON LABOR MARKET DEMAND IN INDONESIA DURING THE 2023–2025 PERIOD

Amalia Puspita Putri Nugraheni [1], Anggita Sri Rahayu [2] Diana Mardiyani [3] and Raden Ai Lutfi Hidayat[4]

[1)2)3)] Student in the Economic Education Study Program, Pamulang University, South Tangerang City, Indonesia
[4)] Lecture in the the Economic Education Study Program, Pamulang University, South Tangerang City, Indonesia

Abstract

This study aims to analyze the relationship between the unemployment rate and labor market demand in Indonesia during the 2023–2025 period. Unemployment is a structural issue that has a direct impact on economic stability and social welfare. Based on data from Statistics Indonesia (BPS), the labor force increased from 149.38 million people in February 2024 to 153.05 million in February 2025. However, this increase was not accompanied by a decline in the number of unemployed people, which instead rose from 7.20 million to 7.28 million. This study employs a descriptive qualitative approach through a literature review of various scientific sources and official statistics. The findings indicate that the mismatch between workforce skills and industry needs, the dominance of the informal sector, and limited job creation are among the main factors contributing to unemployment. Furthermore, the use of technology, particularly big data, provides strategic opportunities for analyzing employment trends and developing more effective labor market policies. Collaboration among the public sector, private sector, and educational institutions is therefore essential to creating a labor market that is flexible, inclusive, and responsive to global changes.

Key words: *Unemployment, Labor Market, Labor Demand, Big Data, Employment Policy.*

Introduction

Unemployment is one of the major challenges in an economic system, as it has a direct impact on social stability and societal welfare. According to Kasnelly (2020), unemployment includes individuals who are actively seeking employment, starting a new business, or have secured employment but have not yet begun working. This issue is not limited to Indonesia but is also a global phenomenon faced by many countries. The Indonesian government, through the Regional Revenue and Expenditure Budget (APBD), has identified reducing unemployment as one of its key objectives in promoting inclusive macroeconomic development. Nevertheless, unemployment in Indonesia continues to exhibit concerning dynamics. According to Statistics Indonesia (BPS, 2023), out of a total labor force of 147.71 million people, approximately 7.86 million remained below the poverty line. Although this figure decreased by 0.54% compared to the previous year, significant structural challenges persist. The COVID-19 pandemic further exacerbated this situation. According to Putri et al. (2021), Indonesia's economic growth contracted by 5.32% in the second quarter of 2020 compared to the same period in the previous year. The OECD (2020) reported that the global poverty rate increased sharply from 5.3% to 8.4% within the first three months of the pandemic (Laoli, 2020). This situation demonstrates the vulnerability of the labor market to global shocks. In this context, the utilization of technologies such as big data offers a potential solution. Big data enables stakeholders to better understand labor market trends, identify skills gaps, and conduct more accurate workforce planning. A study by Widiasanti et al. (2024) revealed that data obtained from social media and job-search platforms can provide deeper insights into the causes and impacts of unemployment, while also supporting the implementation of more adaptive and responsive employment policies. In Indonesia, the use of big data has begun to be adopted by the government to support evidence-based policymaking in the employment sector. According to Kurniawan et al. (2023), collaboration among the public sector, private sector, and educational institutions is essential to align labor supply with labor demand, thereby creating a labor market system that is flexible, inclusive, and competitive. Data from Statistics Indonesia (BPS) indicate that the size of the labor force has continued to increase from year to year. In February 2023, the labor force stood at 144.01 million people, with 7.99 million unemployed. One year later, in February 2024, the labor force increased to 149.38 million people, while the number of unemployed declined to 7.20 million. However, in February 2025, despite a further increase in the labor force to 153.05 million people, the number of unemployed rose to 7.28 million. In addition, the percentage of the employed population working full-time declined from 68.57% in 2023 to 66.19% in 2025. These data indicate that Indonesia's labor market continues to face significant challenges in achieving sustainable employment absorption and providing high-quality employment opportunities.

Table 1. Comparison of the Labor Force and Unemployment in Indonesia, 2023–2025

Year	**Labor Force (million people)**	**Number of Unemployed (million people)**	Percentage of Full-Time Workers (%)
Februari 2023	144,01	7,99	68,57
Februari 2024	149,38	7,20	68,07
Februari 2025	153,05	7,28	66,19

Source: Statistics Indonesia (BPS), 2023–2025.

The table indicates that although the labor force has increased, the employment opportunities available have not been sufficient to absorb this growth. The mismatch between the growing labor force and the availability of job opportunities is a major factor contributing to unemployment. This condition also exacerbates income inequality and increases the economic and social burden on the government. According to Zakiati (2016), Indonesia’s steadily increasing economic growth has not been sufficient to generate an adequate number of employment opportunities. Several factors contribute to this condition, including the limited capacity of business sectors to absorb labor and the mismatch between job seekers’ skills and labor market requirements. In addition, government intervention in setting minimum wages and the relatively weak role of labor unions have also placed pressure on labor market efficiency. Under these conditions, it is essential for the government to expand employment opportunities as a key strategy for addressing the rapid growth of the working-age population. The imbalance between the number of job seekers and the availability of employment opportunities not only contributes to unemployment but also results in the underutilization of human resource potential that could otherwise be optimized to support economic development. By understanding these dynamics, this study aims to analyze the relationship between the unemployment rate and labor market demand in Indonesia, particularly during the 2023–2025 period. This study also seeks to explore the utilization of information technology as a strategic approach to reducing unemployment and improving labor market efficiency in the future.

Methods

This study employs a descriptive qualitative approach using a literature review as the primary method of data collection and analysis. This approach was selected because it provides a comprehensive understanding of unemployment and labor market demand in Indonesia based on available written sources. A literature review enables researchers to reassess previous research findings, identify relevant patterns, and draw conclusions that systematically and critically support the focus of the study. As explained by Putri (2020), a literature review involves a series of activities that include collecting data from relevant sources, reading and recording important information, and managing the data objectively, systematically, analytically, and critically. The main distinction between this method and other research methods lies in the source of the data, as all information is obtained from written documents such as scientific journals, articles, official statistical reports, and relevant academic books. In the context of this study, the data examined were obtained from literature addressing two main variables, namely the unemployment rate and labor market demand in Indonesia during the 2023–2025 period. The references include findings from national and international studies, data from Statistics Indonesia (BPS), and scientific studies related to employment policies, macroeconomic conditions, and the influence of technology on the structure of the labor market. All of these data were analyzed to provide an in-depth understanding of the relationship between labor force growth and employment absorption, as well as the challenges and opportunities faced by Indonesia's labor market in the digital and post-pandemic era.

Results and Discussion

The labor market is a setting in which direct interaction occurs between workers, who supply labor services, and employers, who demand these services to support their production activities. Within this system, workers seek employment opportunities that match their skills and capabilities, while employers seek workers who can meet the specific needs of their organizations (Wirba et al., 2021). This mutually beneficial relationship not only facilitates employment relationships but also serves as a key driver of national economic growth and improvements in societal welfare. A well-functioning labor market plays an important role in maintaining a balance between labor supply and labor demand. By providing adequate employment opportunities, the labor market can help reduce unemployment, increase productivity, promote workplace innovation, and provide greater job security and employment protection. Furthermore, a dynamic labor market can create opportunities for continuous training and skills development, which ultimately strengthens workforce competitiveness (Salaris & Tedesco, 2020). However, a study by Kikuchi, Kitao, and Mikoshiba (2021) indicates that, in certain contexts, labor market conditions may also have adverse effects on societal welfare, particularly when employment systems fail to provide adequate protection for informal workers and other vulnerable sectors. This finding reinforces the importance of public policy in promoting labor market flexibility without compromising social protection. Informal employment often serves as a temporary alternative for workers who have limited access to the formal sector. Although the informal sector can provide alternative sources of income, the lack of legal protection, social security, and training opportunities leaves workers in this sector in a vulnerable position (Nugraha et al., 2023). Therefore, strengthening an inclusive labor market system requires particular attention to the needs of informal workers through appropriate training programs, regulatory support, and their gradual integration into the formal sector. From an economic perspective, labor demand is a **derived demand**, as it originates from the demand for goods and services. In other words, an increase in demand for products encourages firms to expand their production capacity, which subsequently generates additional demand for labor (Maryati et al., 2021). Therefore, macroeconomic conditions play a crucial role in determining labor demand dynamics. When the economy grows steadily, firms tend to expand production and employ more workers. Conversely, during periods of economic contraction, firms may implement efficiency measures, including workforce reductions, which can lead to an increase in the unemployment rate.

Labor demand is also influenced by various factors, including wage levels, production efficiency, and technological developments. Wage levels should be responsive to market conditions to ensure that firms remain competitive while retaining a qualified workforce (Sukanti et al., 2021; Fachrurazi et al., 2021). In this context, the demand for labor is referred to as **derived demand** because it depends on the final demand for goods and services (McConnell et al., 2013). When economic activity increases, firms require more workers to meet their production targets. Conversely, when the economy slows down, labor demand tends to decline, leading to an increase in unemployment. This relationship confirms that macroeconomic fluctuations directly affect labor market stability and serve as an important indicator for assessing overall national economic conditions.

According to BPS (2019), Indonesia's unemployment rate in August 2019 reached 7.05% of the total labor force, indicating an increase compared with the previous period. This suggests that growth in the labor force is not always accompanied by a sufficient increase in employment opportunities (Putri & Soelistyo, 2018). If this imbalance persists, it may lead to various socioeconomic problems, including increased poverty, crime, and social instability (Rusniati & Agustin, 2018; Wilis, 2016). Another important factor is the level of wages. The Indonesian government implements a minimum wage policy as an instrument to ensure that workers receive an adequate level of income. The minimum wage is determined by considering decent living needs, economic growth, and inflation rates in each region and is established by the relevant regional authorities (Jadoon et al., 2021). The primary objective of this policy is to promote workers' welfare and ensure a more equitable distribution of income.

However, the implementation of minimum wage policies has generated both support and criticism. On the one hand, such policies can improve workers' motivation and increase productivity (Rakhmawati & Boedirochminarni, 2018; Widayana & Darsana, 2020). On the other hand, if the minimum wage is set too high, it may constrain employment growth because firms may become reluctant to hire additional workers. Concerns also arise regarding its potential effects on inflation and business competitiveness (Harjanto et al., 2022; Hauf, 2017). Indonesia's labor market is also characterized by a relatively large proportion of unskilled workers and informal-sector employment, making the implementation of minimum wage policies increasingly complex. Some economists view this issue as part of the broader challenge of unequal income distribution (Varlitya et al., 2023). Although minimum wage policies are intended to provide a social safety net for low-income workers, a mismatch between wages and productivity may create labor market rigidities and potentially exacerbate unemployment. Sukirno (as cited in Latifa & Pribadi, 2021) classifies unemployment based on two main dimensions: its causes and characteristics. Based on its causes, unemployment can be classified into four categories: **1)** Frictional Unemployment, which occurs during the transitional period when workers move from one job to another. 2) Cyclical Unemployment, which arises from fluctuations in the business cycle, particularly during economic downturns or recessions**. 3)** Structural Unemployment, which results from structural changes in the economy that alter the pattern of labor demand**.** **4)** Technological Unemployment, which occurs when human labor is displaced by machinery, automation, or technological advancements.

Meanwhile, based on its characteristics, unemployment can be classified into the following categories: 1) Open Unemployment**,** referring to individuals who are actively seeking employment but have not yet found a job. 2) Disguised Unemployment**,** which occurs when more workers are engaged in a particular activity than are actually required, resulting in limited or insignificant contributions to economic output. 3**)** Seasonal Unemployment, which occurs in sectors that are highly dependent on seasonal conditions, such as agriculture. 4) Underemployment**,** referring to individuals who work fewer than 35 hours per week. Underemployment can be further divided into: **1)** Voluntary Underemployment, referring to individuals who consciously choose not to work full-time. **2)** Involuntary Underemployment, referring to individuals who are willing and available to work full-time but are unable to obtain suitable full-time employment.

In addition to these classifications, Apririandi (2024) and Alam (2016) emphasize that unemployment can also be examined from the perspective of workers' motivation and willingness to work. Some individuals remain unemployed while waiting for employment that matches their preferences or because the wages offered are considered inadequate, which may be associated with conjunctural and voluntary unemployment. Utami et al. (2022) further explain that low levels of educational attainment contribute to higher unemployment. The mismatch between job seekers' qualifications and industry requirements also widens the gap in labor absorption. Workers in rural areas tend to have fewer opportunities for economic empowerment than those in urban areas. At the same time, rapid technological development has accelerated changes in employment structures, further disadvantaging workers who are unable to adapt to new skills and technological requirements. As emphasized by Todaro (as cited in Yunita, 2019) and Venesia Delila et al. (2024), unemployment and poverty are closely related. High unemployment rates deprive individuals and households of stable sources of income, thereby increasing the risk of poverty. This condition places additional pressure on society, constrains investment, and ultimately reduces overall national productivity. Considering the various factors discussed above, it can be concluded that unemployment in Indonesia is **a** multidimensional issue. Addressing it requires more than merely creating new employment opportunities; it also requires cross-sector collaboration, policy reforms, stronger education and vocational training, and the effective utilization of technology. Inclusive and sustainable long-term strategies are therefore essential for developing a labor market that is resilient and adaptive to changing economic, social, and technological conditions.

Conclusion

Based on the analysis and discussion presented in this study, it can be concluded that unemployment remains a serious issue in Indonesia, with far-reaching implications for social conditions, economic performance, and national development. Although the labor force increased from 2024 to 2025, this growth was not accompanied by a sufficient expansion of employment opportunities, resulting in an increase in the absolute number of unemployed people. Indonesia's labor market faces several structural challenges, including a mismatch between job seekers' skills and industry requirements, the dominance of the informal sector, and insufficient vocational training aligned with labor market needs. In addition, global economic fluctuations, technological developments, and minimum wage policies also influence the dynamics of labor demand. The utilization **of** big data in the employment **sector** offers promising opportunities for developing evidence-based strategies. This technology can support the identification and mapping of skills demand, facilitate more effective matching between job seekers and suitable employment opportunities, and assist policymakers in designing more targeted training programs. Therefore, unemployment in Indonesia cannot be separated from the complexity of the labor market, which is influenced by macroeconomic variables, employment policies, the structure of the education system, and technological readiness. Addressing this issue requires a multidimensional and collaborative approach involving various stakeholders to create a more inclusive, adaptive, and sustainable labor market.

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