

Analysis of the Influence of Economic and Educational Factors on the Unemployment Rate in Indonesia

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Abstract: *This study aims to analyze the factors influencing the unemployment rate in Indonesia, particularly from economic and educational perspectives. The research employs a literature review method by examining relevant journals, books, and data from Statistics Indonesia. The findings indicate that economic factors such as economic growth, inflation, and minimum wages significantly affect the unemployment rate. Meanwhile, educational factors, including education level, skills, and the alignment between competencies and labor market demands, also play a crucial role in workforce absorption. However, the mismatch between education and industry needs, along with the lack of soft skills, remains a major cause of educated unemployment. Therefore, strong collaboration among the government, educational institutions, and industry is necessary to develop a competent workforce aligned with labor market demands.*

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Introduction

Achieving stable economic growth and improving community welfare are the main objectives of a country's economic activities (Murni, 2016). However, these goals are difficult to achieve when the unemployment rate remains relatively high, as unemployment can create various negative impacts on economic and social stability. Unemployment is one of the macroeconomic problems that continues to be a major challenge for governments in improving public welfare and encouraging economic growth in Indonesia. Therefore, efforts to reduce unemployment have always been an important part of the national development

agenda, as outlined in the National Medium-Term Development Plan (RPJMN) for each period.

Although Indonesia's economic growth has shown a positive trend in recent years, this condition has not been fully accompanied by optimal job creation. The imbalance between the continuously increasing labor force and the limited availability of employment opportunities is one of the main causes of the relatively high unemployment rate in various regions. Based on data from the Central Bureau of Statistics, Indonesia's open unemployment rate (TPT) in August 2024 was 4.91%, which decreased to approximately 4.85% in August 2025 and further declined to around 4.74% at the end of 2025. Although this trend indicates a gradual decline, these figures still suggest that labor absorption in Indonesia has not yet reached optimal levels.

High unemployment can lead to various negative consequences, including increased poverty rates, decreased purchasing power, and widening income inequality (Rizal et al., 2020; Akbar et al., 2022). Unemployment in Indonesia is influenced by various interconnected factors, particularly economic and educational aspects. Economic factors such as economic growth, wage levels, and inflation play an important role in determining the economy's ability to absorb labor. Meanwhile, educational factors relate to the quality of human resources, skill levels, and the suitability of workforce competencies with labor market demands.

However, increasing education levels do not always lead to a reduction in unemployment. The mismatch between graduates' competencies and industry needs, along with limited practical skills and soft skills, contributes to the rise of educated unemployment. Based on these conditions, this study aims to analyze the factors influencing unemployment in Indonesia, particularly from economic and educational perspectives, using a literature review approach. This research is expected to provide a more comprehensive understanding of unemployment issues and serve as a basis for formulating appropriate solutions.

Research Methods

This method is carried out by reviewing and analyzing various written sources such as scientific journals, books, and official reports that are relevant to the research topic. The type of research used is descriptive qualitative research, which is research that aims to describe and explain the phenomenon of unemployment based on the results of previous research without using direct statistical analysis. The object of research in this study is the unemployment rate in Indonesia and the factors that affect it, namely education factors (education level, skills, and non-conformity with the needs of the labor market) and economic factors (economic growth, inflation, minimum wage, and poverty). This study uses secondary data obtained from various relevant literature. The data collection technique is carried out through documentation studies by collecting literature from scientific journals, research articles, and

official data such as the Central Statistics Agency (BPS). The literature used was selected based on relevance to the topic, credibility of the source, and year of publication within the last ten years so that the data remained valid and actual. Data analysis is carried out using qualitative descriptive analysis techniques through several stages, namely data collection, data reduction, data presentation, and conclusion drawn. At the data reduction stage, irrelevant information is filtered so that it focuses on educational and economic factors. Furthermore, the data is presented in the form of a description to see the pattern of relationships between variables, then conclusions are drawn based on the results of the analysis.

Result and Discussion

Unemployment Phenomenon in Indonesia

The unemployment phenomenon in Indonesia remains a structural economic challenge that has received sustained attention from researchers and policymakers alike. According to BPS (2023), Indonesia's open unemployment rate stood at 7.86 million people in August 2023, representing a decrease from 8.42 million in 2022. Despite this gradual decline, unemployment continues to undermine economic development by reducing aggregate demand, increasing poverty rates, and widening social inequality (Rizal et al., 2020; Akbar et al., 2022). Widarni and Bawono (2023) further confirm that unemployment negatively affects labor force participation stability, particularly during economic shocks such as the 2020 pandemic, which pushed the national unemployment rate to 7.07%. Research by Syarifudin et al. (2024) demonstrates a significant long-run cointegration between graduate unemployment, government education spending, inflation, and economic growth, underscoring that unemployment is not merely a social problem but a direct impediment to national economic performance.

The unemployment phenomenon in Indonesia is largely caused by the imbalance between the quality of the labor force and the capacity of the labor market to absorb workers. Educational and economic factors influence each other in determining the level of national unemployment (Diniyah & Fisabilillah, 2022; Frisnoiry et al., 2024). Frisnoiry et al. (2024) explained that the rapid growth of the labor force is not always accompanied by adequate job opportunities, creating intense competition in the labor market where individuals without relevant skills face greater difficulty in obtaining permanent employment. This finding is consistent with Wicaksono et al. (2023), who used SAKERNAS panel data to demonstrate that education-occupation mismatch carries significant wage penalties and reduces the probability of formal employment. Furthermore, Khoiruddin et al. (2024) found that informal employment, largely occupied by workers whose skills do not match available formal jobs, is strongly associated with higher risks of multidimensional poverty, reinforcing the link between labor market mismatch and welfare deterioration. Comparatively, research by Suryono et al. (2026) on Sakernas data from 2011 to 2020 reveals that overeducation at the academy/diploma and university levels consistently exceeds 50%, indicating a systemic



inability of the Indonesian labor market to fully absorb educated workers according to their qualifications.

Furthermore, technological advancements and globalization are reshaping the labor market structure in Indonesia in measurable ways. Wihardja et al. (2023) found, using investment and Sakernas data from 2010 to 2016, that new investment projects in the digital manufacturing sector reduce employment in that sector by 0.5 percent, with the most pronounced negative effects falling on female workers, less-educated youth, older workers, and blue-collar workers. This skill-biased technological change pattern means that workers in routine-task intensive occupations face a higher displacement risk. The ILO (2022) projects that automation could affect up to 56% of wage employment in Southeast Asia over the next two decades, with Indonesia being particularly vulnerable given its large share of low-skilled manufacturing and agricultural employment. These findings align with Díaz Pavéz et al. (2024), who document that automation in emerging economies disproportionately displaces workers in routine task-intensive jobs, creating structural unemployment that cannot be resolved through macroeconomic stimulus alone. If workers fail to adapt through upskilling and reskilling, their chances of securing formal employment will become increasingly limited in the digital economy.

On the other hand, the continuous growth of the productive-age population each year presents additional challenges for the government. The increasing number of labor force participants that is not matched by adequate job creation will result in higher unemployment rates. Therefore, comprehensive strategies are required to address unemployment issues, both through improving education quality and implementing economic policies that encourage job creation.

Educational Factors Affecting Unemployment Rate

1. Competency Gap Among Graduates

From the educational perspective, one of the main obstacles frequently encountered is the gap between graduates' competencies and the standards expected by employers. Ramadhina et al. (2025) identified that the high rate of educated unemployment is caused by mismatch problems or qualification discrepancies. Many graduates from educational institutions possess formal degrees but lack the technical skills required by modern industries. This indicates that the education system has not fully adapted to the evolving demands of the labor market. Supporting this finding, data from BPS (2023) shows that the open unemployment rate for university graduates was 5.34%, higher than the national average of 4.86%, while only 53% of Indonesian university graduates work in fields aligned with their study program (World Bank, 2022, as cited in Bharoto, 2024). These figures provide concrete empirical evidence of systemic mismatch between educational outputs and labor market requirements.



In addition, educational curricula that remain heavily theory-oriented rather than practice-oriented contribute to the low work readiness of graduates. Suryono et al. (2026) found that horizontal mismatch in Indonesia reached 60.52% in 2019, increasing to 55.2% in 2020, before declining to 33.50% in 2022 and 40% in 2023 — indicating that despite some improvement, a substantial share of graduates continue to work outside their field of study. This persistent mismatch directly contributes to elevated unemployment because workers in mismatched positions face lower productivity, wage penalties, and higher turnover rates. Bharoto (2024) further documents that the high qualification standards demanded by companies represent a structural barrier for fresh graduates who possess theoretical knowledge but lack practical experience, forcing companies to incur additional training costs and, in many cases, to prefer hiring experienced workers over recent graduates. Khoiruddin et al. (2024) also showed that mismatched employment correlates with higher multidimensional

2. Lack of Soft Skills Mastery

This issue is reinforced by the findings of Anggraini et al. (2024), which state that soft skills such as communication skills, leadership, and adaptability often become determining factors in the recruitment process. Even when individuals have strong academic achievements, without adequate interpersonal skills, they may struggle to compete with other candidates in a professional work environment.

The importance of soft skills is also quantified in recent empirical research on Indonesian graduates. Setiawati and Wijayanti (2022) found that soft skills, including time management and teamwork, are the strongest indicators of work readiness among non-STEM graduates in Indonesia. Husein (2024) similarly demonstrates that soft skills are highly influential in career transitions and job readiness even at the postgraduate level. The lack of soft skills development in formal education directly inflates unemployment rates because it reduces the employability of graduates across sectors: Adely et al. (2021) established that the persistent unemployment challenge is compounded by the critical skills mismatch between what graduates possess and what employers demand. In Indonesia, higher education curricula still predominantly emphasize technical skills and have not fully incorporated structured soft skills training into academic syllabi (Husein, 2024; Peersia, 2024), creating a structural gap that prolongs unemployment for qualified graduates. Therefore, improving education quality must also include the systematic development of soft skills as an integral part of the learning process.

3. Education as a Long-Term Investment

Education is a long-term investment that plays a crucial role in improving the quality of human resources. Human capital theory, as articulated by Becker (1994, as cited in Wicaksono et al., 2023), posits that education enhances individual productivity by developing skills and competencies that enable workers to secure higher-quality employment. Empirical evidence from Indonesia supports this theoretical proposition: Widarni and Bawono (2023) found that higher levels of education contribute to the stability of workforce participation



during economic shocks, while Diniyah and Fisabilillah (2022) established that improvements in the Human Development Index (HDI), driven largely by educational attainment, have a negative and significant effect on unemployment rates. These results align with Adam and Negara (2015), who argued that Indonesia's path to reducing poverty and youth unemployment requires a better-integrated education and skill training system. However, the impact of educational improvements cannot be felt immediately and requires a considerable period of time, as Syarifudin et al. (2024) confirm that the cointegration between government education spending and economic growth operates over the long run.

Improving education quality must also be supported by adequate educational facilities and competent educators. Bharoto (2024) recommends updating higher education curricula to align with job market needs, increasing internship and job training programs to provide practical experience, and enhancing career development services on campus. In addition, cooperation between educational institutions and industries needs to be strengthened so that graduates are better prepared for employment. Thus, when educational investment is strategically aligned with labor market demands and supported by industry collaboration, it becomes one of the key solutions in reducing unemployment in Indonesia.

Economic Factors Affecting Unemployment Rate

1. Economic Growth and Labor Absorption

From the economic perspective, macroeconomic conditions play a key role in determining how many workers can be absorbed into employment. Diniyah and Fisabilillah (2022) found that economic growth measured through Gross Domestic Product (GDP) has a negative and significant effect on unemployment rates. This means that increases in national economic activity directly create opportunities for new job creation.

However, the effectiveness of labor absorption is often limited when economic growth is more capital-intensive rather than labor-intensive. The use of machines and automation technologies in industries increases efficiency but simultaneously reduces the need for human labor. Consequently, high economic growth does not always lead to a significant reduction in unemployment.

2. Minimum Wage Policy

In addition to economic growth, minimum wage policies also have a significant impact on unemployment rates. Mustika (2010) explained that increases in minimum wages that are not accompanied by improvements in labor productivity can become an operational burden for companies. When labor costs are considered too high, companies tend to implement efficiency measures by limiting new hiring or even reducing their workforce.

Minimum wage policies must consider various aspects, including regional economic conditions, labor productivity, and company capabilities. With appropriate policies, minimum wages can improve worker welfare without reducing employment opportunities.

3. Investment and Job Creation

Investment plays an important role in creating new employment opportunities. The higher the level of investment, the greater the potential for job creation. Investments in labor-intensive sectors such as manufacturing, agriculture, and tourism can absorb a large number of workers.

However, low investment levels in several regions remain one of the causes of limited employment opportunities. Therefore, the government needs to create a conducive investment climate through policies that support economic growth and business development.

Overall, this discussion shows that education and economic factors are two variables that must work together to address unemployment in Indonesia. Education functions as a provider of labor quality, while economic conditions determine the availability of job opportunities for the workforce. Diniyah and Fisabilillah (2022) noted that improving the Human Development Index (HDI) through education is a long-term investment whose results require time to influence the broader economy. Therefore, synergy between adaptive education curricula and economic policies that encourage investment in labor-intensive sectors is essential. Without alignment between these sectors, structural unemployment will remain a major challenge for national development.

Conclusion and Recommendation

This study indicates that unemployment in Indonesia is caused by a mismatch between educational competency standards and the economy's absorption capacity, which tends to be capital-intensive. These findings reinforce the academic understanding that possessing formal degrees without industry relevance, along with limited inclusive economic growth, increases the risk of educated unemployment. From an economic perspective, wage policies and investments that are less supportive of labor-intensive employment also slow the reduction of unemployment rates. The practical implication of this study is the need to align curricula with market demands and implement more flexible economic policies to encourage investment in labor-intensive sectors. For future development, further research is recommended to analyze the effectiveness of fiscal policies and digital training in addressing automation challenges to reduce unemployment more effectively. This study emphasizes that unemployment solutions cannot be implemented separately but must integrate educational and economic policies to achieve long-term effectiveness.

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