



The Impact of Population Growth Rate, Minimum Wage, and Education on The Unemployment Rate in 2022

Amelia Mahdali

The Central Statistics Committee of Gorontalo City, Gorontalo, Indonesia

Email: ameliamahdali123@gmail.com

Abstract: Increasing living standards is the main goal of economic development. Unfortunately, the government does not appear to be concerned about the current unemployment issue. The unemployment rate is typically correlated with population growth and is not reinforced by the availability of new jobs; employers' unwillingness to create jobs for them means finding or creating jobs is impossible. Conversely, low levels of education can raise unemployment because it will be harder to find an appropriate job without expertise or knowledge. On the other hand, living an acceptable life and earning an adequate income will improve life quality. This research aimed to examine the relationship between rates of unemployment and the rate of population growth, the minimum wage, and the typical duration of schooling. Secondary data from 2022 was used in this investigation. The research applied double regression analysis with SPSS version 22 as the analytical tool. Based on the analysis's findings, migration, birth rate, and death rates were the main influencing factors, with a significant rate of $0.793 > \alpha = 0,005$ indicating that the population growth rate did not affect the unemployment rate. The minimum wage had a long-term effect rather than a direct one during the year, even though it had no obvious impact on the unemployment rate of $0.189 > \alpha = 0.05$. The data showed that, even though the typical duration of schooling rises annually, the unemployment rate is significantly influenced by it ($0.001 < \alpha = 0.05$). This would indicate that the unemployment rate was not a direct factor in the decrease in the unemployment rate.

Keywords: Population Growth Rate; Minimum Wage; Typical Duration of Schooling; Unemployment Rate

Article History:

Received on 15 Dec 2023

Revised on 22 Dec 2023

Accepted on 01 Jan 2024

Doi: 10.37479

Indexing:

Google Scholar; Portal Garuda; Crossref; SINTA 3 (Science And Technology Index)

The journal allows the authors to hold the copyright without restrictions and allow the authors to retain publishing rights without restrictions. international license.

Copyright © 2024 Author | This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 International License

INTRODUCTION

With a population growth rate of 1.17% per year, Indonesia will have 275.77 million people living there in 2022 (Central Statistics Agency, 2022). In Indonesia, the issue of unemployment is inextricably linked to the country's huge population, where unemployment is defined as the inability to find work or lose one's job (Rahmawati, 2016). Establishing a country's growth currently involves the important issue of unemployment in both developed and developing nations.

The Central Statistics Agency (2022) defines unemployment as the group of people who are looking for jobs or getting ready for a new job, as well as the group of people who are not looking for jobs. The reason is that they believe they will never be able to find a job for a particular reason, or they are employed.

The rate of population growth is rising annually. The number of workers is growing along with the population, which will lead to an increase in the unemployment rate if job opportunities stagnate rather than increase. According to Arsyad (2004:268), residents are those who live in villages, cities, and so on. The relatively large population imbalance between support and inadequate environmental resilience potentially causes this problem.

The lack of new jobs, people's unwillingness to create minimum jobs for themselves, their perception that it is impossible to create jobs, or both are typically factors relating to the unemployment rate. On the other hand, a lack of education can contribute to higher unemployment rates because it will be harder to find a suitable occupation without knowledge, whereas a decent life with a good income will increase the quality of life.

For the workers, this policy is great news. Every province has a different Standard of Decent Living Needs (KHL), which is then adjusted for the minimum wage. The total increase in living standards is adjusted to the minimum wage if the standard of living increases. The minimum wage has a positive impact on workers' average wages, but it may have an impact on the unemployment rate through employee average minimum wages; if the minimum wage increases, so does the unemployment rate.

Education quality is measured by one of the three basic approaches in the human development indicator (IPM), knowledge, which determines one of development's successes. One of the factors that affect the labor market is public education. According to Todaro (2000), the labor market has an impact on workers' level of formal education. The number of schooling years that a population aged 15 and over completes in formal education (excluding recurring years) is defined by the Central Statistical Office for the Average Age of School (RLS)/Mean Year of Schooling (MYS) as a means of measuring the population's formal education quality.

Performance availability and impact measurement are crucial issues in the construction implementation stage because they can provide an overview of the results and efforts made to measure the efficiency of enterprises in achieving outputs. Monitoring and evaluation are essential components of construction planning and implementation. This research applies quantitative methods for monitoring and evaluation, with information or explanations expressed in numerical form as the output.

The analysis results are used to examine more deeply the issues related to the unemployment rate, particularly the variables. They are predicted to increase the unemployment rates, the rate of population growth, the minimum wage, and the typical duration of schooling.

The Unemployment Rate in Indonesia

Based on the information obtained from Indonesia's Central Statistical Office, the country's unemployment rate in 2022 was 5.85%. this figure is an increase of 2,48% compared to the open unemployment rate in 2021. This high figure illustrates the state of the unemployment rate in Indonesia. The data on the unemployment rate for the provinces in Indonesia in 2022 are the following:

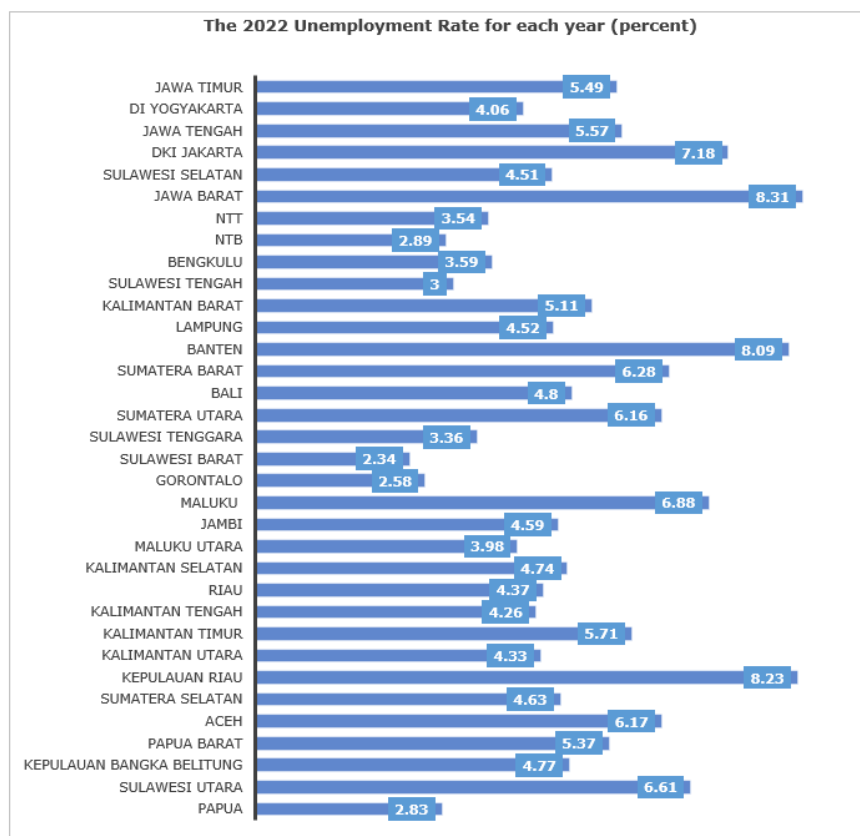


Figure 1. Graph of the 2022 Unemployment Rate for each year (percent)

Source: Central Statistics Agency 2022 (processed data)

The province-wide unemployment rate in Indonesia is a result of both a lack of job opportunities and low market demand. The ability, skills, and willingness to learn of job seekers are significant factors that cause unemployment in Indonesia. The chart showed that the five provinces with the highest unemployment rate (TPT) were Maluku 6.88%, Banten 8.09%, Jakarta DKI 7.18%, West Java 8.31%, and Riau Island 8.23%. Meanwhile, Central Sulawesi had the lowest rate of employment at 3%, as did NTB at 2.89%, Papua at 2.83%, Gorontalo at 2.58%, and West Sulawesi at 2.34%.

On analyzing the data relating to the top five provinces, it is obvious that West Java had the highest total indicated unemployment rate of 8.31% (Central Statistics Agency at West Java, 2022) when compared to the population, which was 38.67 million people with a workforce population of 50 million. Despite having a TPT of 8.23%, the province of Riau Island's (Central Statistics Agency at Riau Island, 2022) highest figure pointed out that the post-Covid-19 impact of 1.62% still impacts the unemployment rate because of the temporary unemployed population, reduced working hours, and dismissals from jobs.

Next was Banten Province, which had an unemployment rate (TPT) of 8,09% (Central Statistics Agency at Banten, 2022). This highest number demonstrated that a major contributing factor to it was the high proportion of residents who have long lived in the region to follow family members; some additionally choose to attend college and find a job there. Afterward, DKI Jakarta province had an unemployment rate (TPT) of 7.18% (Central Statistics Agency at DKI Jakarta, 2022).

It showed that the unemployment rate is still impacted by post-COVID; disability resulting from dismissal from jobs, a reduction in working hours, as well as not working, was also occurring in Riau Island province. Maluku province had an unemployment rate of 6.88% (Central Statistics Agency at Maluku, 2022). It demonstrated seasonal jobs, particularly in the agricultural sector, where workers are only employed during the growing season. It has an impact on the unemployment rate in Maluku. Additionally, it is impacted by the fishing industry that workers only work when the weather is good for sailing.

Analyzing the data referring to the top five lowest provinces, Central Sulawesi Province had the lowest employment rate (TPT) of 3% (Central Statistics Agency at Central Sulawesi, 2022). It showed that the majority of the population is 15 years of age or older, which correlates to the unemployment rate. When the population increases, there is a tendency for the working-age population to rise, with the most dominant jobs in the agricultural, forestry, and fishing industries. The province's workforce might not have a permanent position or be able to fulfill a standard of living, despite the low rate of unemployment.

Then, West Nusa Tenggara province was in fourth place in Indonesia with the lowest unemployment rate (TPT) of 2.89% (Central Statistics Agency at West Nusa Tenggara, 2022), which indicated the unemployment rate decreased from the previous year. This was due to a 0.09% increase in the workforce in West Nusa Tenggara. It does not guarantee that the area's employed population has a steady occupation and a high standard of living. Next was Papua Province, whose lowest TPT of 2.89% (Central Statistics Agency at Papua, 2022) indicated that a lot of the workforce in Papua is employed in the forestry, agriculture, and fishing industries.

Numerous people have been indicated to work in this sector, including one family member who works as a family worker. The low unemployment rate does not guarantee that workers in the province have a stable job and an adequate standard of living. Gorontalo province had a 2.58% unemployment rate (Central Statistics Agency at Gorontalo, 2022). It signified that seasonal unemployment and half-employment have an impact on the rate of unemployment in Gorontalo. In the province, seasonal unemployment is the result of demand for jobs occurring only during specific times of the year, usually in the fishing and agricultural industries.

Whereas there are still people looking for a job or willing to accept other jobs, half of the unemployment is caused by a decrease in hours worked. Typically, they are recent graduates from the services and transportation sectors. The workforce condition in Gorontalo Province does not guarantee that everyone has a stable job and a standard of living well-being, despite the low unemployment rate. The province of West Sulawesi had the lowest unemployment rate of 2.34% (Central Statistics Agency at West Sulawesi, 2022), showing that the working-aged population's unemployment rate is primarily concentrated in the agricultural, forestry, and fishing industries. It has been discovered that the majority of those employed in this field are family members who work as family workers. Despite the low unemployment rate, working-age people are still impacted by COVID-19. West Sulawesi Province's workers could lack a stable occupation or be able to afford a standard of living, despite the low unemployment rate.

Population Growth Rate in Indonesia

Based on data by the Central Statistics Agency (2022), increased by 1,17%, while the population growth rate in 2022 was 1,25%, and in 2021 it was 1,22%. This population growth rate is the average population growth each year. This figure describes the condition of the annual population growth rate that occurs in Indonesia. The population growth rate data for the entire Indonesian province in 2022 is as follows:

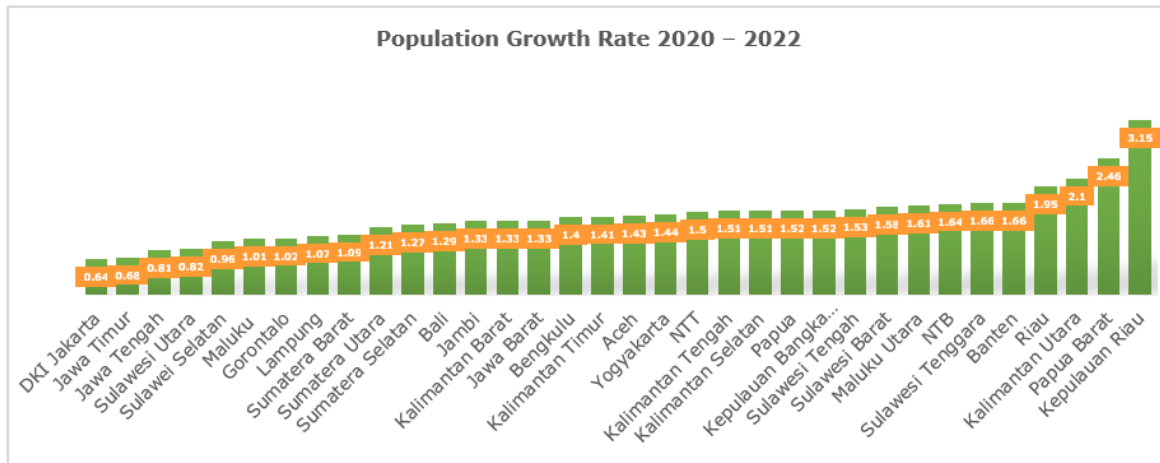


Figure 2. Graph of Population Growth Rate 2020 – 2022

Source: Central Statistics Office 2022 (processed data)

In the middle of 2021, the population of Indonesia increased at a rate of 0.92% compared to 2020. After that, by the middle of 2022, there had been an increase of 1.13%. The graph demonstrated that of the five provinces, the ones with the fastest population growth rates were Riau Island (3.15%), West Papua (2.46%), Riau (1.95%), South East Sulawesi (1.66%), and West South East Nusa (1.64%). While North Sulawesi at 0.82%, East Java at 0.68%, Central Java at 0.81%, South Sulawesi at 0.96%, and Jakarta DKI at 0.64% had the lowest growth rates.

When examining the data from the top five provinces, Riau Island province had the highest population growth rate at 3.15% (Central Statistics Agency at Riau Island, 2022) It showed the population is still primarily comprised of people between the ages of 15 and 64. It means that the province is still in the demographic bonus period. Next, West Papua province, whose population growth rate was the highest at 2.46% (Central Statistics Agency at West Papua, 2022), represents one of the districts that is experiencing annual growth.

This signifies that the district's rates of migration and fertility are greater than its rates of death and migration. Afterward, Riau Province, whose population was growing at the fastest rate of 1.95% (Central Statistics Agency at Riau, 2022), This highest number demonstrated the allure of population migration because of the availability of jobs in a variety of economic sectors, such as the plantation, processing, and mining of oil and gas. Southeast Sulawesi province had the highest population growth rate, at 1.66% (Central Statistics Agency at Southeast Sulawesi, 2022).

The highest figure indicated a rise in growth; reproductive women between the ages of 15 and 49 gave birth with an average of two to three children. West Nusa Tenggara: 1.64% (Central Statistics Agency at West Nusa Tenggara, 2022). The rate of growth had increased because this highest figure represented one of the districts with the greatest population of any other district or city. As for the higher levels of migration and growth that cause the increase.

Based on the data related to the five provinces in South Sulawesi with the lowest population growth rate (0.96%) (Central Statistics Agency at South Sulawesi, 2022), it was shown that the government has placed a strong emphasis on population growth through programs that promote family planning. In addition, a certain number of people are displaced as they relocate to look for jobs. North Sulawesi province followed, with a population growth rate of 0.82% (Central Statistics Agency at North Sulawesi, 2022); this lowest number typically reflected the government's emphasis on population growth through family planning programs.

However, rapid population growth will affect the environment, leading to a decrease in environmental quality. Central Java province had the lowest population growth rate, at 0.81% (Central Statistics Agency at Central Java, 2022), which was typically indicative of the government's emphasis on population growth through family planning programs. In addition, migration, deaths, and births cause the population growth rate. East Java Province followed with a population growth rate of 0.68% (Central Statistics Agency at East Java, 2022); this lowest number typically reflected the government's emphasis on population growth through family planning programs. The reasons are people who were forced to return home temporarily because of work-related reasons, those who were seeking employment somewhere else, and those who are pursuing higher education in other places. DKI Jakarta had the lowest growth rate, 0.64%, which indicated emigration (Central Statistics Agency at DKI Jakarta, 2022).

It was people who left the area. It happened because of three groups of people: those who were temporarily employed and had to return to their home country; those who were seeking employment elsewhere; and those who were pursuing higher education somewhere else. Consequently, Jakarta DKI's population growth rate has been decreasing.

Minimum Wage Every Month and Development Every Year in Indonesia

Than the Minimum Wage in Indonesia, based on data by the Central Statistics Agency (2022), the minimum wage in Indonesia in 2022 increased by 1,09%. This figure describes the minimum wage situation in Indonesia. The minimum wage data for the entire Indonesian province in 2022 is as follows:

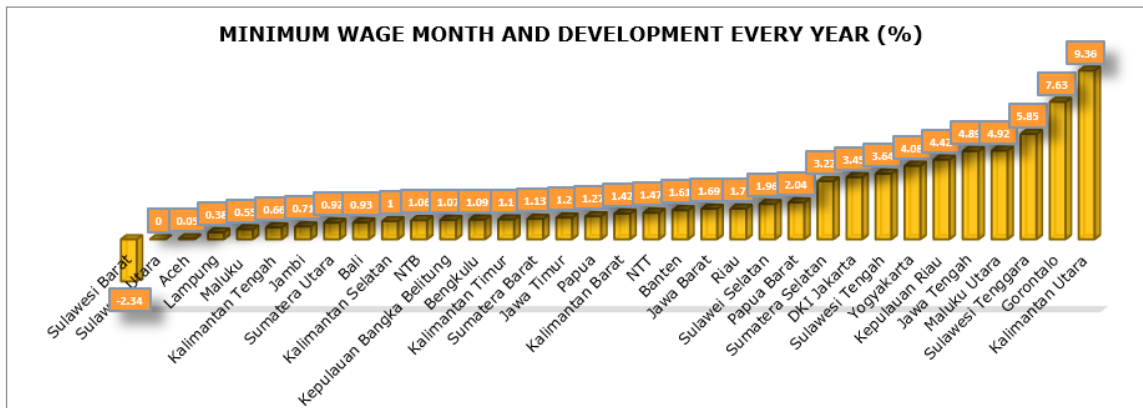


Figure 3. Graph of Minimum Wage Every Month and Development Every Year (%)

Source: CNBC Indonesia (data processing)
<https://glints.com/id/lowongan/ump-2022/>

Based on Indonesia CNBN data sources in 2022, the average minimum wage in Indonesia was 1.09% for the entire province. Annual changes to the minimum wage are made by achieving a reasonable standard of living as well as productivity and economic growth in each province. The graph showed that North Kalimantan had the highest minimum wage at 9.36%, as well as Gorontalo at 7.63%, Southeast Sulawesi at 5.85%, Central Java at 4.89%, and North Maluku at 4.92%. West Sulawesi had the lowest wage of -2.34%, North Sulawesi 0%, Aceh 0.05%, Lampung 0.38%, and Maluku 0.55% among the five provinces.

North Kalimantan Province had a minimum wage growth of 9.36%, which, based on the data for the top five provinces, generally represented an increase in minimum wages. It will affect the public's interest in working and making enterprises so that domestic production will increase. Furthermore, the ability of the workplace and labor productivity are necessary for the government to be able to set the minimum wage according to market conditions and labor market demand. Next, Gorontalo province had developed a minimum wage of 7.63%. This high graph generally demonstrates how an increase in the minimum wage will affect people's interest in finding jobs and starting businesses, which will continue to increase production in the area. Moreover, Gorontalo's labor market conditions are evaluated based on job competence, needs, and consumer price indexes. Next, Southeast Sulawesi Province had a 5.85% minimum wage growth. This high number typically indicates a minimum wage increase that will impact people's need to get jobs and begin businesses, which will support further increases in domestic production.

Additionally, as the availability of workers for these types of jobs becomes more and more limited, they can raise labor wages, which has led to a rise in market wages. Then comes Central Java Province, in which minimum wages have increased by 4.89%. This highest percentage generally indicated how an increase in the minimum wage will impact people's willingness to seek jobs and start businesses, which will increase production in the region. Furthermore, the importance of Excellent Life Needs (KHL) in Central Java has been rising steadily due to the need to continue ensuring workers' welfare.

With a minimum wage growth of 4.92% in North Maluku province, this high number tends to indicate an increase in minimum wages that will impact people's desire to find jobs and conduct business, leading to an increase in domestic production. Finally, the condition of the economy as a whole has an impact on the minimum wage. In a growing and developing economy, wages typically increase; in a slow-growing economy, however, wages may be under pressure to decrease.

West Sulawesi Province had a minimum wage growth rate of -2.34%, which was lower than the previous year, based on data on the top five lowest provinces. The economic and workforce circumstances identified in this lowest figure consisted of employment rates, purchasing capacity parities or purchasing ability balances, and average wages, which range between 50% of the highest and 50% of the lowest wages of a specific job position. In North Sulawesi Province, the minimum wage had increased by 0% from the previous year.

This lowest number essentially summed up the government's minimum wage policy, which protects workers' wages from decreasing or undeserving wages that cause an imbalance in the labor market. Moreover, it determined the low level of worker productivity by looking at their quality and capacity to finish duties. Aceh province had the lowest minimum wage growth rate, which was 0.05%. It effectively summed up the government's minimum wage policy, which aims to protect workers' wages by preventing them from receiving the lowest or inadequate wages, which could contribute to an imbalance in the labor market. Concerning the

policy, it considers people's goals, particularly their ability to purchase goods, and adjusts the minimum wage properly, taking into account the sustainability of jobs and business. Next, Lampung province had a minimum wage growth of 0.38%. This lowest figure essentially summed up the government's minimum wage policy, which aims at sustaining workers' wages by preventing them from receiving the lowest or unworthy wages, which could influence an imbalance in the labor market. In addition, macroeconomic factors and a few indicators that showed how labor absorption contributed to economic growth determined the year's minimum wage for Lampung province. Maluku Province had the lowest minimum wage growth rate, at 0.55%. It is typically an indication of the government's minimum wage policy. It aims to prevent workers from receiving the lowest or unworthy wages, which could contribute to an imbalance in the labor market. Furthermore, the rate of labor absorption, the purchasing power parity variable, the average wage, and various other jobs and economic factors are taken seriously when determining this year's minimum wages.

School Age Education in Indonesia

The typical duration of schooling in Indonesia for the entire province in 2022 is as follows:

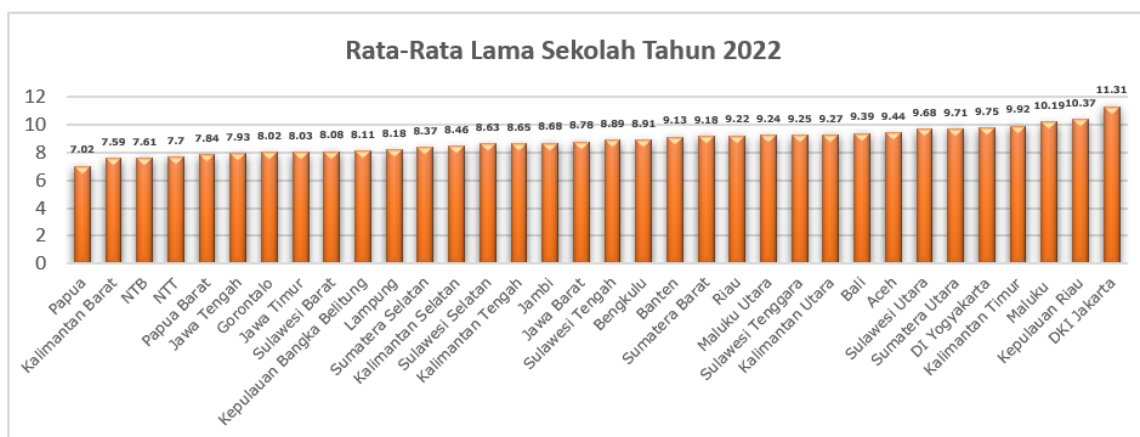


Figure 4. Graph of Typical Average Duration of Schooling (2022)

Source: Central Statistics Committee 2022 (processed data)

Based on data by the Central Statistics Agency In 2022, the typical duration of schooling (RLS) or Mean Year of Schooling (MYS) for RLS Indonesia was 8.69 years. Accordingly, Indonesians who were 25 years of age or older had, on average, completed 8,69 years of formal education or were almost finished in the ninth grade of secondary school. The typical duration of schooling graph indicated there were the top five provinces, namely Yogyakarta (9.75 years), East Kalimantan (9.92 years), Maluku (10.19 years), Jakarta DKI (11.31 years), and Riau Island (10.37 years). West Papua (7.84 years), East Nusa Tenggara (7.7 years), West Nusa Tenggara (7.61 years), West Kalimantan (7.59 years), and Papua (7.02 years) were the five provinces with the lowest rate. The highest figure represented an increase from the previous year and was based on data from the top five provinces. DKI Jakarta province had a standard school year of 11.31 years, which was equivalent to the 12th grade in senior high school. In an average school duration of 10.37 years or an average of the 11th grade in senior high school, Riau Province had the highest rate for the completion of a 12-year mandatory study program, even though some students still had unfinished their education until they graduated.

Maluku Province had the highest standard school-age population, having completed education up to the tenth grade in senior high school. Whereas the government encourages the province to have achieved the 12-year compulsory curriculum, it has not fully fulfilled the mandatory educational programs. The average year of schooling in Maluku Province was 10.19 years, which was equivalent to the 10th grade in senior high school. Then, East Kalimantan Province, whose average duration of schooling was 9.92 years, or the equivalent of the tenth grade in senior high school, is considered to have partially fulfilled the government's 12-year compulsory educational program. This high graph generally indicated a population of school age that had completed education on average up to the tenth grade in senior high school. This highest graph generally represented a typical school-age person who had completed education up to the 10th grade of senior high school. The government encourages achieving the 12-year compulsory educational program, but it does not fully fulfill the required program. Yogyakarta had an average level of education of 9.75 years, which was equivalent to Grade 10 in senior high school.

Based on data collected from the top five lowest-ranking provinces in West Papua, the typical duration of schooling in these provinces was 7.84 years, or the equivalent of the 8th grade in junior high school. This lowest graph typically represents a population of school-aged people. Yet completing education on average up to the 8th grade in junior high school does not fully fulfill the 12-year educational programs that the government emphasizes. This lowest graph typically represented school-age people who had completed education on average up to the 8th grade in junior high school, indicating that achieving the 12-year compulsory educational programs encouraged by the government has not fully fulfilled the compulsory program. Then, in East Nusa Tenggara province, with an average school duration of 7.7 years, equivalent to the 8th grade in junior high school, West Nusa Tenggara

province had an average school duration of 7.61 years, which was equivalent to the eighth grade in junior high school. It generally signifies a population of school age that completes their education on average up to the eighth grade in junior high school, indicating that they have not fully completed the 12-year curriculum that the government emphasizes. Afterward, West Kalimantan province was 7.59 years old, which was equivalent to the eighth grade in junior high school. This lowest graph typically represents the average school age of people, finishing education up to the eighth grade in junior high school. It demonstrated that the 12-year mandatory educational programs that the government emphasizes have not been fully fulfilled. The lowest figure generally defines the average school-age population. Completing education up to the 7th grade in junior high school meant achieving the 12-year compulsory educational program encouraged by the government, but it has not fully fulfilled the mandatory curriculum. The average age of Papua Province was 7.02 years, or equivalent to the 7th grade in junior high school. The lack of new jobs, people's unwillingness to create minimum jobs for themselves, their perception that it is impossible to create jobs, or both are typically factors relating to the unemployment rate. On the other hand, a lack of education can contribute to higher unemployment rates because it will be harder to find a suitable occupation without knowledge, whereas a decent life with a good income will increase the quality of life. Finding out how much the rate of population growth influences the unemployment rate, the impact of the minimum wage on the unemployment rate, and the typical duration of schooling on the unemployment rate is the aim of this research.

METHODOLOGY

This research uses a quantitative research design. The secondary macro data of 2022 was used as the research's data source. Secondary data refers to the secondary processing of field research findings. The Central Statistical Committee of 2022 provided the online media whereby the data used in this research was collected (CNBN Indonesia, <https://glints.com/id/lowongan/ump-2022/>) and sources from previous researchers. The independent variable and the dependent variable were the two variables applied in this research.

A variable that influences another variable or generates a cause in another is called an independent variable. On the contrary, a dependent variable affects the presence of a free variable. The population growth rate (X1), minimum wage (X2), typical duration of schooling (X3), and unemployment rate (Y) were the research's independent variables. A double linear regression analysis tool was used to examine the effects of the population growth rate, the minimum wage, and the typical duration of schooling on the unemployment rate. Double linear analysis with the regression equation formula as follows:

$$Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e$$

Information: Y = dependent variable a = constant / intercept

β_1 = regression coefficient
 x_1 = independent variable X_1
 β_2 = regression coefficient
 x_2 = independent variable X_2
 β_3 = regression coefficient
 x_3 = independent variable X_3
 β = regression coefficient
 e = error

RESULTS

Heteroscedasticity Test

The heteroscedasticity test, according to Ghozali (2018:137), examines evidence of variance inequality between the residuals of one observation and the other in a regression model. It is referred to as homoscedastic if the variance of the residue between one observation and another is constant; otherwise, it is referred to as heteroscedastic.

Table 1. Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.2784	7.1680	4.9662	.93909	34
Residual	-2.52361	3.34623	.00000	1.29569	34
Std. Predicted Value	-1.797	2.345	.000	1.000	34
Std. Residual	-1.857	2.462	.000	.953	34

A Dependent Variable: The Unemployment Rate

Estimated Value: 3.2784 at the minimum, 7.1680 at the maximum, 4.9662 on average, 0.93909 at the standard deviation, and 34 observations overall. The residual average was zero, the minimum was -2.52361, the maximum was 3.34623, the standard deviation of the residuals was 1.29569, and there were 34 observation data points in all. The standard residual estimation parameter is explained in the third line.

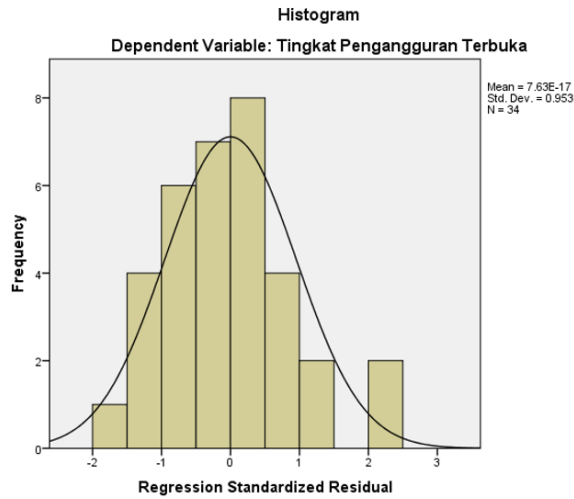


Figure 5. Regression Residual Histogram

In a regression condition, a normality assumption test was conducted first before providing an interpretation of the regression results. Regression analysis and other parametric analyses can proceed when the residues are distributed normally. Otherwise, non-parametric data analysis was used to test the hypothesis. Histogram diagrams and p-plot graphs were used in this normality test to determine whether or not the data was distributed normally. The test results above showed that the residue formed the normal and spread equally to the right and left of the normal curve. This indicated that the residual fulfills the normality assumption.

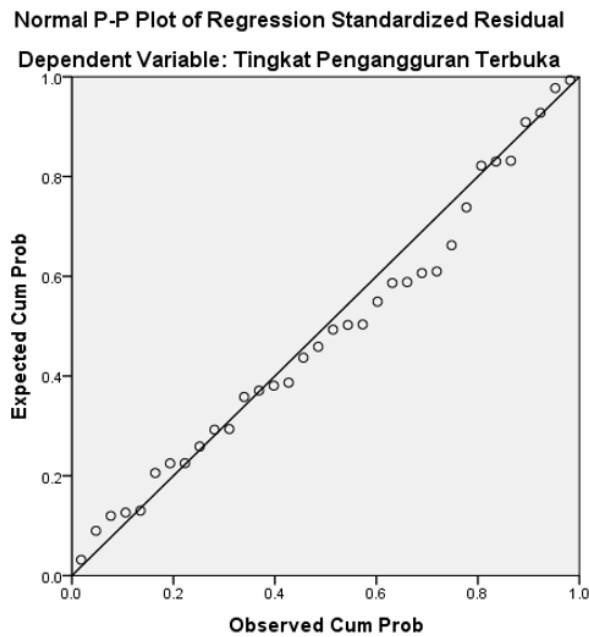


Figure 6. Normal P-P Plot of Regression Residuals

The research that had been presented, had to do with factors that included the province-level unemployment rate, typical duration of schooling, minimum wage, and population growth rate in Indonesia. Analysis and discussion were then conducted to determine the impact and relationship between the variables.

Table 2. Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Average Length of Residence, Population Growth Rate, Minimum Wage ^b	.	Enter
a. Dependent Variable: Unemployment Rates			
b. All requested variables entered.			

The research variables as well as the methods applied to the regression analysis were explained in the results table "Variables Entered/Removed" above. In this analysis, the variables that were considered independent were

the population growth rate, the typical duration of schooling, and the minimum wage. Nevertheless, the unemployment rate variable was the dependent variable. There were neither any numbers nor spaces in the Variables Remove column since no variables had been removed.

Multiple Regression Analysis Test

Simultaneous Test (F Statistical Test)

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.587 ^a	0.344	0.279	1.35894

a. Predictors: (Constant), Average Duration of Shooling, Population Growth Rate, Minimum Wage

The "Model Summary" table provided the value of the determination coefficient, or contribution of the impact of the minimum wage, typical duration of schooling, and population growth rate variables simultaneously on the unemployment rate variable. The designated determination factor, or R square, based on the SPSS output table was 0.344, or 34.4%. This showed that the unemployment rate variable (Y) was concurrently (collectively) influenced by the minimum wage (X2), the typical duration of schooling (X3), and the population growth rate (X1) variables. However, unstudied variables affect 65.6%.

Table 4. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.	
1						
	Regression	29.103	3	9.701	5.253	.005 ^b
	Residual	55.401	30	1.847		
	Total	84.504	33			

a. Dependent Variable: unemployment rate
b. Predictors: (Constant), Average Duration of Schooling (X1), Population Growth Rate (X2), Minimum Wage (X3).

The "Anova" table showed that the minimum wage, typical duration of schooling, and population growth rate did not simultaneously influence the unemployment rate variable. The recognized sig value is 0,005, determined by analyzing the significance (Sig) of Anova's results. The accepted hypothesis, based on the rate of population growth (X1), minimum wage (X2), and typical duration of schooling (X3), collectively influenced the unemployment rate (Y). It can be concluded from the F test that the Sig value was 0.005 < 0,005.

Partial Test (t Statistical Test)

A statistical t-test, according to Ghozali (2017:56), demonstrates the extent to which one independent variable influences the dependent variable for a hypothesis that the other is constant. The significance level for this test is set at 0.05.

Table 5. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.8	2.381		-1.596	0.121
	Population Growth Rate (X1)	0.131	0.496	0.04	0.265	0.793
	Minimum Wage (X2)	-0.142	0.105	-0.205	-1.344	0.189
	Average Length of the City (X3)	1.006	0.259	0.58	3.885	0.001

a. Dependent Variable: Unemployment Rates

The data of the regression equations and the lack of partial (independent) influence of the variables Population Growth Rate, Minimum Wage, and typical duration of schooling on the unemployment rate are provided by the "Coefficients" table. To determine whether the unemployment rate variable (Y) was partially influenced by the population growth rate (X1), minimum wage (X2), and typical duration of schooling (X3). Yet, the research's hypothesis was:

1. The first hypothesis, or H1, stated that the unemployment rate (Y) was influenced by the population growth rate (X1).
2. H2, or the first hypothesis, presented the unemployment rate (Y) against the minimum wage (X2).
3. H3, or the first hypothesis. The typical duration of schooling (X3) affected the unemployment rate (Y).

A significant value (Sig) < 0.05 indicated that either the hypothesis was accepted or there was an independent variable influence (X) on a dependent variable (Y). When an important value (Zig) > a probability of 0.05, it showed the presence of independent variables (X).

1. First Test of Population Growth: Partial t-test. The population growth rate variable (X1) had a significance value (Sig) of 0.793 based on the SPSS result table. It can be inferred that H1, or the first hypothesis rejected, indicated that there was no effect of the population growth rate (X1) on the unemployment rate because the Sig. value was $0.793 > \alpha$ probability of 0.05. (Y).
2. In the second minimum wage t-test or partial t-test, the variable Minimum Wage (X2) had a significance value (Sig) of 0.189 relating to the SPSS Coefficients result table. Considering that the value of Sig. $0.189 > \alpha$ probability 0.05, it can be concluded that the rejection of H2, or the second hypothesis, demonstrated that the minimal wage (X2) had an impact on the unemployment rate (Y).
3. In the third t-test for the typical duration of schooling, or partial t-test, the variable typical duration of schooling (X3) had a significance value (Sig) of 0.001 by the SPSS coefficients result table. The third accepted hypothesis, or H3, indicated that the typical duration of schooling (X1) had an impact on the unemployment rate because the Sig. value was $0.001 < \alpha$ probability of 0.05 (Y).

DISCUSSION

Impact of Population Growth on Unemployment Rates

The findings demonstrated that in Indonesia in 2022, the rate of population growth would not have a significant impact on the country's unemployment rate. Accordingly, an increase in the population growth rate does not affect the unemployment rate, and a decrease in the growth rate has no impact on the level of the unemployment rate. This condition clarifies the country's population growth rate, as deaths, migration, and birth rates all have an impact on population growth but do not impact the unemployment rate in Indonesia. Each employment sector has an impact on the unemployment rate by absorbing both economic growth and the number of workers. Herman (2017) conducted similar research concerning the impact of a city's population and minimum wage on the unemployment rate in Pekanbaru from 2010–to 2017. The unemployment rate in Pekanbaru City is fluctuating, with a trend that tends to increase, and population growth has a significant and negative impact on the unemployment rate.

The impact of the minimum wage on the unemployment rate

The research results showed that in Indonesia, in 2022, the minimum wage had absolutely no impact on the country's unemployment rate. This implies that raising the minimum wage has no effect on the number of unemployed people, and decreasing it will have no impact on unemployment rates. The fact is that unemployment is unaffected by the minimum wage. The enforced minimum wages have a long-term impact rather than a direct one throughout the year because of the stiff wage.

This, implementation of the minimum wage has no direct effect on the company's decision to lay off employees. Long-term, though, the minimum wage will motivate companies to lay off employees, which will raise the unemployment rate. This is to Borjas' research in Wiguna et al. (2019), which found that a company's response to financial pressure is reflected in labor absorption when minimum wages increase. Relating to wages in the narrowest specific term, that is, wages paid to the workforce who perform duties for someone else in the employment relationship, an increase in wages has the effect of titling, which motivates them to put in extra hours at work because they increase the amount of money they receive for each hour they work. Additionally, the income effect has the opposite effect, indicating that an increase in wages leads to workers preferring to spend more of their free time creating and purchasing more of the products they want.

The impact of the typical duration of schooling on the unemployment rate

The results showed that by 2022, the typical duration of schooling in Indonesia would have a significant impact on the country's unemployment rate. Higher education, according to the human capital theory, may enhance productivity. Therefore, it can increase output and create higher labor absorption. The data in this research's analysis of how education affected unemployment rates. It indicated that, on average, vocational school and senior high school graduates had a direct and positive impact on employment rates. Even though the general public has an upper-middle-class education, they are more selective in choosing jobs.

They indirectly create their jobs due to a variety of factors, including knowledge, skills, and economic factors. People tend to choose to be unemployed rather than work with qualifications that are irrelevant to their education or goals. Therefore, the typical duration of schooling cannot decrease the unemployment rate, even if it rises annually. This correlates with the shifting perspectives on wages and current jobs among higher-educated populations, as stated in the Siskawati & Zulfhi Surya study (2021). As a result, highly educated residents decide to hold off on finding a job that is appropriate for their abilities.

The educated unemployed have completed secondary to higher education and are the middle-to-second-class unemployed workforce. This is based on the government's 12-year mandatory curriculum. Education is prepared as a way to improve well-being in a developing society by taking advantage of current employment opportunities. Differently, the students who receive educational services are the ultimate beneficiaries of the program. The primary reason for educational unemployment arises from a lack of coherence in the planning of education development and the creation of jobs unrelated to their major, which prevents graduates from being employed in the workforce.

CONCLUSION

Based on the results of the data analysis, the following conclusions can be drawn:


1. The unemployment rate was negatively and insignificantly affected by the rate of population growth. Even though there is an increase in population from period to period, data showed that the rate of population growth in Indonesia is different from province to province. However, an increase in population has no impact on the unemployment rate. The factors of birth, migration, and death influence an increase in population growth.
2. The unemployment rates were positively and significantly impacted by the typical duration of schooling. The development of public schools in Indonesia does not guarantee stable jobs for the workforce. According to data, vocational school and senior high school graduates had the highest unemployment rates. Although the general public has an upper-middle-class education, they are more selective about finding jobs. They indirectly create their jobs due to a variety of factors, including knowledge, skills, and economic factors. It is normal for people to prefer not to work with people whose qualifications are irrelevant to their interests or level of education; consequently, even with annual increases in the typical duration of schooling, the unemployment rate will not decrease.
3. The unemployment rate was negatively and insignificantly affected by the minimum wage. It has no real impact on employment. Because of their rigid nature, the minimum wages that are determined have a long-term impact on the year rather than a short-term impact. Thus, the regulation of a minimum wage has no immediate impact on the company's decision to lay off employees. On the contrary, the minimum wage will eventually encourage companies to lay off employees, which will increase the unemployment rate.

One of the most important ways that the central government pays more attention to the annual rate of population growth is by implementing a two-child family planning program. It is expected that by implementing this program, the rate of population growth will be highlighted and the decrease in economic growth will be influenced. However, it is the responsibility of the government to support people in pursuing their goals of higher education, and society as a whole—especially parents—must encourage children to do the same.

Consequently, the more education a child receives, the more skills and knowledge they will have to avoid the minimum of knowledge. When those minimum wage policies do not reduce the welfare rate of the workforce, it is anticipated that the central government will maintain its current policy of taking minimum wages seriously for each province. It is expected that further research will look more deeply at the variables related to the unemployment rate.

REFERENCES

- Ghozali, Imam. 2018. *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25*. Badan Penerbit Universitas Diponegoro: Semarang.
- Herman. (2019). "Pengaruh Jumlah Penduduk Dan Upah Minimum Kota Terhadap Tingkat Pengangguran Terbuka di Kota Pekanbaru. 2010-2017." Vol. 15 No. 2, page. 20–32.
- Iskar, I. W. P., Akbar, A. F., Dozan, W., & Yudiansyah, A. M. (2021). Dampak Penerapan Pembatasan Sosial Berskala Besar (Psbb) Terhadap Penghidupan Pekerja Sektor Informal Di Provinsi DKI Jakarta. *Jurnal Pemerintahan Dan Keamanan Publik (JP Dan KP)*, 68–79. <https://doi.org/10.33701/jpkp.v3i2.1001>
- Mankiw, Gregory. 2006. *Teori Makro-ekonomi Edisi Keempat*. Jakarta: Erlangga.
- Population Reference Bureau. 2017. *World Population Sheet 2017*. Accessed on November, 9th 2023.
- Pratomo, D. S., & Saputra, P. M. 2011. Kebijakan Upah Minimum untuk Perekonomian yang Berkeadilan: Tinjauan UUD 1945. *Journal of Indonesian Applied Economics*. Vol 5 No 2. Page: 269-285.
- Rahmawati, et al. (2016). Faktor-faktor yang berhubungan dengan kejadian asfiksia pada bayi baru lahir di ruang medical record RSUD Pariaman. Thesis.
- Sadono Sukirno. 2016. *Makro Ekonomi Teori Pengantar*. Jakarta: PT. Rajawali Pers. Statistik Indonesia. 2022.
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. The 24th Publication. Bandung: Alfabeta.
- Siskawati, N., & Zulfhi Surya, R. (2021). Pengaruh Harapan Lama Sekolah, Rata – Rata Lama Sekolah Terhadap Tingkat Pengangguran Terbuka Di Kabupaten / Kota Provinsi Riau. *Selodang Mayang: Jurnal Ilmiah Badan Perencanaan Pembangunan Daerah Kabupaten Indragiri Hilir*, 7(3), 173–177. <https://doi.org/10.47521/selodangmayang.v7i3.231>
- The Central Statistics Committee of Gorontalo City. *Publikasi Keadaan Angkatan Kerja di Indonesia*. August. 2022.
- The Central Statistics Committee of Gorontalo City. *Booklet Survei Angkatan Kerja Nasional*. August. 2022.



Todaro F, Michael. 2000. Pembangunan Ekonomi Dunia Ketiga. Volume I, Jakarta: Erlangga.

Wiguna, A. B., Ekonomi, J. I., Malang, K., & Minimum, U. (2019). Penyerapan Tenaga Kerja Industri Provinsi Jawa Timur: Apakah Upah Minimum Masih Menjadi Faktor Penentu? Jurnal EcceS Abstrak : Penyerapan Tenaga Kerja Industri Provinsi Jawa Abstract : Industrial Employment in East Java Province : Does Minimum Wage Stil. Economics, Social, and Development Studies, 6(2), 214–229.