



# Analysis of Economic Growth, Regional Minimum Wage, and Inflation on the Unemployment Rate in Brebes Regency

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**Abstract.** The unemployment rate declines as a result of a lack of income and assets to meet basic needs such as food, clothing, housing, good health, and education. This cannot be done separately from the issues of unemployment, education, health and other issues explicitly related to the problem of poverty. The study aims to analyze economic growth, the Regional Minimum Wage (UMR), and unemployment rate inflation in Brebes County. Quantitative approaches are used in this research. Secondary data was obtained from the Central Statistics Agency (BPS), journals, and books on economic growth, UMR, and inflation data in Brebes Regency. Sampling is done by a stratified random sampling system, by first making a classification or grouping of residents according to certain characteristics. The secondary data used is annual data from BPS Brebes Regency in percent in the form of time-series data from 2010 to 2020. The technique used in this study is descriptive analysis with a quantitative approach. According to the findings of the analysis, economic growth does not have a significant impact on the unemployment rate; the magnitude of UMR does not have a significant impact on the unemployment rate; and the magnitude of UMR does not have a significant impact on the unemployment rate. The magnitude of influence of 24.60% and the remaining 75.40% was affected by variables not included in the regression equation or unexplored variables.

**Keywords:** Economic growth · Regional minimum wages · Inflation and unemployment

## 1 Introduction

Unemployment can be described as a situation where there is a transfer of a number of factors of labour to other fields which will not reduce the overall output of the sector of the origin or it is said that the marginal productivity of the units of the factor of labour in which they work is zero or close to zero or also negative [1]. This unemployment occurs because there are those who have not got a job even though they have tried their best and there are also those who are lazy to find work or are lazy to work [2]. Unemployment can

occur as a result of the high rate of change in the workforce, which is not matched by the existence of wide job vacancies and the absorption of labour which tends to be small in percentage. Unemployment has the effect of a lack of people's income, and it will reduce the level of living prosperity. The high unemployment rate has a negative impact on society, resulting in social issues such as crime and decreased prosperity.

The unemployment rate in 2019 in Brebes Regency increased to 7.39% and then the following year it rose by 2.55% to 9.83%, and then in 2021 it decreased to 9.78% unemployment rate. This makes the Brebes Regency government serious in tackling poverty and unemployment [3]. In addition, from BPS records, the number of unemployed in Central Java currently reaches 1,214,342 people or about 6.48% of the total workforce in Central Java in 2020 which reached 18,751,277 people. The figure also shows that the unemployment rate rose by around 2.04% compared to 2019 or before the Covid-19 pandemic took place, where the unemployment rate in Central Java was around 4.44% of the total workforce. Based on BPS macro poverty data as of March 2018, the 2018 Brebes Regency poverty rate is still high, at 17.17% or as many as 309,170 people. Of the 35 regencies/cities throughout Central Java, Brebes occupies the 33rd position out of 35 regencies/cities, above Kebumen Regency and Wonosobo Regency. The stipulation of Brebes Regency as a Brebes Industrial Estate (KIB) is expected to boost socio-economic growth. Previously, the economic growth in Brebes Regency was only 5.47% per year, it is expected to increase to a level of 7.0%.

There is no such thing as a country without unemployment, and the rate of unemployment is one of the most basic indicators of a country's economic performance [4]. The unemployment rate is also an indicator for foreign investors in analyzing the health of a country's economy. In the end, it will influence the decision to invest, because a low unemployment rate can describe a strong and stable economy, so foreign investors are attracted to invest and vice versa. Unemployment causes people to be unable to optimally improve their welfare. This can make the actual national income (*actual output*) achieved lower than the potential national income (*potential output*). As a result, the level of community welfare achieved is lower than the level of prosperity that might be expected. Unemployment does not increase the rate of economic growth. Unemployment has at least two adverse effects on the private sector. First, labour unemployment will usually be accompanied by the excess capacity of industrial machines in the company. This situation clearly will not encourage companies to invest in the future. Second, unemployment caused by the sluggishness of business activities, the company has reduced profits. Low profits reduce the company's desire to invest. These two things clearly will not affect economic growth in the future.

That income growth helps to reduce unemployment, particularly for those who are absorbed in training, but it increases unemployment for skilled workers who refuse to train [5]. In economic development, economic growth has an important role, considering that high economic growth can trigger the success of economic development. In the end, it will create an even distribution of population prosperity in a region. Increased capacity for economic growth will indirectly impact the growth and development of the industrial sector. The GDP growth rate increases employment and reduces unemployment. Economic growth is a key indicator of development success and a vital element for poverty reduction.

The impact of the Covid-19 pandemic is not only in the health sector, policies to limit people's mobility also have an impact on the economic sector. BPS of Brebes Regency released the economic growth of Brebes Regency which contracted by 0.59%. This is still better, when compared to the economic contraction at the national level (-2.19%) and Central Java Province (-2.65%). With the vaccination policy and continuing to implement strict health protocols, it is hoped that the trade and tourism sector in Brebes Regency will reopen, as well as create a conducive investment climate. The problem that occurs in the country's economy is economic growth, through GDP (*Gross Domestic Product*) or GDP economic growth is used as a benchmark for the success of a country's economy and GRDP for each region. *The dependency ratio* is seen as one of the demographic indicators *urgent* that can roughly describe the economic condition of a country.

The economic growth of Brebes Regency is above the provincial and national average growth. The rate of economic growth in the last 5 years with an average rate of 4.18%. Meanwhile, at the level of Central Java Province, the average was 3.72% and at the national level, the average economic growth was 3.62%. In December 2021, Central Java experienced inflation of 0.64% with a Consumer Price Index (CPI) of 107.3. Of the six CPI cities in Central Java, all cities experienced inflation. The main cause of inflation in Central Java in December 2021 was the increase in the price of cayenne pepper, broiler eggs, red chili, broiled chicken meat, and cooking oil. The main drivers of inflation in Central Java are the decline in papaya prices, administrative costs for money transfers, gold jewelry, salak and young jackfruit. From the average economic growth, it can be interpreted that the economic picture of Brebes Regency is quite stable, despite the Covid-19 pandemic. Crucial indicators used to see economic conditions in the region at a certain period can be shown by data on Gross Regional Domestic Product (GRDP). Brebes Regency has a GRDP that is quite small when compared to big regencies/cities in Central Java Province, so it requires a knowledge of existing resources so that appropriate policies can be taken and can be used optimally. One of the most important indicators of economic development continuity is high and stable economic growth.

The value of Central Java's GRDP every year its value continues to increase, but it is different from the rate of growth. Factors influencing economic growth are land and other natural resources, number and quality of population and labor. 1) quantiles, which includes all new types or types of investments in land, physical equipment, and human resources; 2) economic growth, which contains all new forms or investments in land, physical equipment, and human resources; and 3) economic growth, which contains all new forms or investments in property, physical equipment, and human capital. 2) Population growth, which will enhance the workforce's size; and 3) technological advancements.

In addition to economic growth, the minimum wage also affects the unemployment and poverty rates. The district/city minimum wage is seen as a policy on wages implemented by the Central Java government. The purpose of the stipulation is to ensure the welfare of workers and workers, increase productivity growth and increase income. This policy is indeed considered very beneficial for workers because the City/Regency minimum wage continues to increase following the level of minimum living needs. Indirectly, the welfare of the workers will be guaranteed. The wage-setting policy by the

government is a policy that is applied as a safety net for workers or labourers so that they are not exploited at work and receive wages that meet the KHM. If the minimum standard of living can be fulfilled, the welfare of workers will increase and they will be free from the trap of poverty [6]. Although in Brebes Regency the minimum wage has increased every year, in determining wages it is still relatively low. This is because the minimum wage is still low below the KHL in Brebes Regency. The size of the UMK every year continues to increase and continues to follow the needs of a decent living set by the respective regencies/cities. The district that has the highest MSE is the city of Semarang and the one with the lowest MSE is the District of Brebes.

The greater the minimum wage, the higher people's income will be, and one's welfare will rise as well [7]. Economic performance indicators that are continuously observed, in addition to economic growth, and the minimum wage, are also inflation. Inflation is an important indicator in the economy that can affect economic growth and people's welfare. Inflation is also a major macroeconomic problem. Inflation is a general increase in prices. This inflation causes people to prefer alternative work activities rather than investing in financial and investment institutions. Inflation is an increase in general goods as a whole and takes place continuously. Inflation that often occurs is basically due to an increase in production costs such as fuel, an increase in worker wages which causes an increase in production costs which in turn will encourage producers to increase the price of goods sold to the market. Inflation is typically calculated using the CPI, which is the CPI for the t-period minus the CPI for the t-1 time frame divided by the CPI for the t-1 year scaled up by 100%.

Inflation must be kept under control because high and instability inflation will have a negative effect on the community's socioeconomic conditions. People's choices economic output will continue to deteriorate, and volatile inflation will make it difficult for economic actors to make decisions if the rate of inflation rises. Although the losses from inflation are much lower and lighter than the losses due to unemployment, their *output* is wasted potential, whereas in inflation there is no real decrease in *output*. One of the policies to increase the unemployment rate in order to reduce the inflation rate is by making a *trade-off* between unemployment and the inflation rate.

Inflation is one of the prerequisites for economic expansion. The impact will expand and elevate the welfare of the community. It can also have both good and bad effects. In general, inflation is defined as the increase in price levels that occurs on a continuous basis. Because of the high inflation rate, the value of domestic products will be higher or more expensive than the increase in the price goods. People will prefer buying foreign goods because they are less expensive. The effect can affect the activities of the local workforce. Inflation generally has an unfavourable impact on economic growth, but whether we realize it or not, one of the economic principles is that in the short term there is a *trade of* inflation and unemployment. This shows that inflation can reduce the unemployment rate and inflation can be used as a way to balance the country's economy. That the Phillips curve illustrates the relationship between inflation and unemployment: the higher the unemployment rate, the lower the inflation rate [8]. With rising prices (inflation), producers increase production capacity by increasing the number of workers to meet demand. As a result, unemployment decreases.

Inflation in 2020 in Central Java was recorded at 1.56% in the Consumer Price Index (CPI) of 105.51. This figure was lower than the national one (1.68%) but was still maintained at the national inflation target of  $3 \pm 1\%$ . In the last five years (2016–2020), Central Java's annual inflation pattern is quite volatile with a *trend* downward. At year rate of inflation in December compared to December 2019 was 1.5%, which was lower than the 2.81% year-on-year inflation in December 2019 compared to December 2018 and the 2.82% year-on-year inflation in December 2018 compared to December 2017. The national inflation rate in Indonesia until March 2021, the inflation rate reached 1.37%. December 2021 Central Java experienced inflation of 0.64%. The highest inflation was in Cilacap City at 0.82%. The main cause of inflation in Central Java in December 2021 is the increase in the price of cayenne pepper, broiler eggs, red chili, broiler meat, and cooking oil. The major drag on inflation in Central Java is the decline in papaya, the administrative costs of money transfer, gold jewelry, bark and young jackfruit [9]. Brebes Regency BPS data which was published in early 2021 shows the depth and severity of poverty in Brebes Regency have increased. This means that it is increasingly difficult for the poor of Brebes Regency to be able to escape from the shackles of poverty. One of the strategies to overcome poverty is to fulfil *basic life access* with the aim of reducing the burden of expenditure and strategy *sustainable livelihood* with the aim of increasing the income of the poor and vulnerable people so that they do not fall into poverty [7]. Economic conditions with high inflation rates can cause changes in *output* and employment opportunities. A high inflation rate has an impact on unemployment. If the inflation rate is high, it can cause a high unemployment rate, this means that the development of job opportunities is getting smaller or in other words, the number of workers absorbed will also be small.

## 2 Review of Literature

Unemployment is the state of a person does not have a job, working less than the working time, or looking for work. There are two main bases for classifying unemployment, namely the *labour force approach* and the *labour utilization approach*, namely the *labour force approach* [10]. This approach defines unemployment as the labour force that is not working. Unemployment is a measure taken if a person does not have a job but they are actively trying to find work in the last four weeks. In this approach, the workforce is divided into three groups, namely: 1). Unemployed, namely those who do not work at all or are looking for work. This group is often referred to as open unemployment (*open employment*); 2) *underemployed*, namely, those who work, but have not been fully utilized, meaning that their working hours in a week are less than 35 h; 3) fully *employed* (*employed*), namely those who work full or the working hours reach 35 h per week.

Economic expansion is the periodic expansion of an economic growth that results in an increase in real national income. The proportion increase in real national income in a given year when compared to previous year's real national income is known as the economic growth rate. Economic growth is defined as an increase in a country's long-term capacity to provide a diverse range of economic goods to its population, as determined by the presence or adaptation of technological, institutional, and ideological advances to the various demands of the current situation [11]. Furthermore, economic

growth refers to an increase in a country’s long-term capacity to provide a variety of economic goods to its community. Economic growth is influenced by four wheels or factors: 1) human capital, 2) natural wealth, 3) capital investment, and 4) changes in technology and innovation [12]. It is the data from the merger that will later be analyzed for factors. This research is a quantitative research using date-time *series*. The population in this study is all data on economic growth, regional minimum wages, and inflation in Brebes Regency from 2010 to 2021. The secondary data were taken in the first and third quarters of which the data was published by BPS. The data collection method in this study used secondary data where the researcher did not make direct observations of the research object. Sources of data for this study were obtained from the website [www.bps.go.id](http://www.bps.go.id) for data on the unemployment rate and regional minimum wage, <http://www.bi.go.id> for official inflation data from Bank Indonesia [13]. After the data is collected, data analysis will be carried out using qualitative methods by describing the data obtained. Descriptive statistical analysis was used to describe the condition of each variable.

Factor analysis is included in the multivariate category, factor analysis itself is a statistical analysis that must have a relationship between variables [12]. In general, factor analysis or principal component analysis embeds data in a new variable grouping based on the close relationship between the dimensions forming the factors [14]. After that, analyzed with regression analysis method (*ordinary least squares*) to compare the effect of variable  $X_1$  (economic growth), the variable  $X_2$  (regional minimum wage), and inflation ( $X_3$ ) to variable  $Y$  (the unemployment rate). The multiple regression model described previously must meet the classical assumptions, which include: 1) normality of data, 2) multicollinearity, 3) auto correlation test, and 4) homoscedasticity test are some of the tests available.

### 3 Research Results and Discussion

Currently, the Indonesian government targets economic growth in 2021 in the range of 4.5% to 5.5%. The economic growth target is quite moderate, considering that until now the economic condition is still filled with uncertainty due to the coronavirus pandemic. Economic growth is assessed by increasing *output*, developing technology, and innovation in the social sector (Table 1).

**Table 1.** Development target for 2020–2-24

No	Identification	Level (%)
1	Economic Growth	5,4–6,0
2	Poverty Rate	6,5–7,0
3	Gini Ratio	0,370–0,374
4	Open Unemployment Rate (TPT)	4,0–4,6
5	Human Development Index (IPM)	75,54

Data source: BPS, 2021.

**Table 2.** Normality test results

	Economic Growth (X <sub>1</sub> )	UMR (X <sub>2</sub> )	Inflation (X <sub>3</sub> )	Unemployment (Y)
Kolmogorov-Smirnov Z	0.972	0.944	0.451	0.675
Asymp. Sig. (2-tailed)	0.302	0.335	0.987	0.753

Source: Processed.

**Table 3.** Multicollinearity test results

Variable	Tolerance	VIF	Conclusion
Economic Growth	0.771	1.297	Non Multicollinearity
UMR	0.844	1.185	Non Multicollinearity
Inflation	0.664	1.506	Non Multicollinearity

Source: Processed.

**Table 4.** Results of autocorrelation test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.497 <sup>a</sup>	0.247	-0.036	1.252	1.188

<sup>a</sup>Predictors: (Constant), X<sub>3</sub>, X<sub>2</sub>, X<sub>1</sub>

Source: Processed data.

Based on Table 2, the Kolmogorov Smirnov with a significant level of 0.05, indicating that this is a significant result indicates that the regression model is normally distributed because the significance level is >0.05.

Based on Table 3, the tolerance value for each variable is greater than 0.10 and the VIF value for each variable is less than 10, so it can be concluded that there are no symptoms of multicollinearity between the independent variables in the regression model equation used.

Based on thick 7, it is known that  $d = 1.188$ ,  $dL = 0.5948$ ,  $dU = 1.9280$ ,  $4-dL = 4 - 0.5948 = 3.4052$ ,  $4-dU = 4 - 1.9280 = 2.072$ . Result =  $(4-d) > dU$ ; =  $(4 - 1.188) > 2.812$ ;  $\hat{\alpha} 2812 > 1.9280$ . In accordance with the criteria that if  $(4-d) > dU$  then there is no negative autocorrelation. Conclusion there is no autocorrelation (Table 4).

Based on the findings of the calculations above, the following significant multiple linear regression equations were obtained.  $Y = 10.403 + -0.506 X_1 + 0.099 X_2 + -0.093 X_3$  (Table 5). Interpretation of regression model as follows. The resulting constant ( $\alpha$ ) of 10,403 indicates that the value of the unemployment rate (Y) is -0.506, if economic growth (X<sub>1</sub>), UMR (X<sub>2</sub>), and inflation (X<sub>3</sub>) are constant. The value of the economic growth coefficient (X<sub>1</sub>), from -0.506, indicates that if economic growth ( $\beta_1$ ) increases by one unit, it will result in a decrease in the unemployment rate of -0.506; The umr

**Table 5.** Test results of multiple linear regression analysis

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	10.403	2.387	4.358	0.002
	Economic_Growth_X1	-0.506	0.503	-1.006	0.344
	UMR_X2	0.099	0.092	1.067	0.317
	Inflation_X3	-0.093	0.263	-0.353	0.733

Source: Processed data.

**Table 6.** Results of t-test

	Model Anova	t	Sig.
1	(Constant)	4.358	0.002
	Economic_Growth_X1	-1.006	0.344
	UMR (X2)	1.067	0.317
	Inflation_X3	-0.353	0.733

Source: Processed data.

coefficient value ( $X_2$ ), of 0.099 indicates that if the UMR ( $\beta_2$ ) increases by one unit, it will result in an increase in the unemployment rate of 0.099; The inflation coefficient value ( $X_3$ )  $-.093$  indicates that if inflation ( $\beta_3$ ) increases by one unit, it will result in a decrease in the unemployment rate of  $-.093$  assuming that other variables are constant.

### 3.1 Hypothesis Testing

It was explained in connection with the problem formulation and the development of hypothesis proposed in the previous segment that the elements that influence the unemployment rate are as follows variable economic growth ( $X_1$ ), UMR ( $X_2$ ), and inlasi ( $X_3$ ).

The significance value of economic growth ( $X_1$ ), the t test is 0.344 or  $> 0.05$ . This indicates that  $H_0$  is accepted and  $H_1$  is rejected, meaning economic growth ( $X_1$ ), has no partial significant effect on the unemployment rate ( $Y$ ); The significant value of UMR ( $X_2$ ), on the t-test is 0.317 or  $> 0.05$ . This indicates that  $H_0$  is accepted and  $H_1$  is rejected, meaning UMR ( $X_2$ ), has no effect on the unemployment rate ( $Y$ ); The value of the significance of inflation ( $X_3$ ) on the t-test is 0.733 or  $> 0.05$ . This indicates that  $H_0$  is accepted and  $H_1$  is rejected, meaning that inflation ( $X_3$ ) has no effect on the unemployment rate ( $Y$ ) in Brebes Country (Table 6).

The magnitude of the significance value of 0.494 indicates that economic growth, UMR, and inflation, have no significant effect simultaneously on the unemployment rate in Brebes (Table 7).



**Table 7.** F test result

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.108	3	1.369	0.873	0.494 <sup>a</sup>
Residual	12.545	8	1.568		
Total	16.6537	11			

Source: Processed data.

### 3.2 Discussion of Research Results High

Forms of unemployment and underemployment are weak resources and existing potentials, become a burden on families and communities, the main source of poverty can encourage an increase in social delinquency and crime; and can hinder development. The future development of the Brebes Regency is heavily reliant on the quality of Indonesian human resources, who must be physically and mentally healthy, as well as possess reliable skills and competencies, in order to fill job openings. Finally, they will have a stable and decent means of income, allowing them to provide for their family's basic needs of life, wellness, and education. In the economic field, the virtues carried out by regional heads are increasing and bringing in halal investment, especially in the Brebes Industrial Estate, which has become a proposed list of National Strategic Projects (PSN) for the period 2020 to 2024 to develop the real sector both in agriculture and forestry, maritime affairs, and mines as well as increase the volume of trade. The total allocation of KIB land reaches 3,976 hectares which include three sub-districts, namely Bulakumba, Losari and Tanjung Subdistricts, which are expected to increase economic growth which will open up job opportunities. This of course will increase economic growth and reduce unemployment.

## 4 Conclusion

Economic development has no significant effect on the unemployment rate in Brebes Regency. The regional minimum wage does not have a significant effect on the unemployment rate in Brebes Regency. The inflation rate has no significant effect on the unemployment rate in Brebes Regency. Contribute to the influence of economic development, minimum wage and inflation. The unemployment rate (Y) in Brebes Regency is 24.60%, the remaining 75.40% is influenced by variables not included in the regression model or variables not looked at.

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