

# Analyzing the Impact of Labor Force and Unemployment on Poverty Rates in Gowa District

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## Abstract

This study aims to analyze the influence of labor force participation and unemployment on poverty rates in Gowa Regency, Indonesia. Employing a quantitative research design, the study utilizes time series data from 2014 to 2023, collected through observation and documentation techniques. The data were analyzed using multiple linear regression with the assistance of SPSS version 2.5. The findings reveal that labor force participation has a negative but statistically insignificant effect on poverty rates. This is evidenced by a t-value of -1.120, which is lower than the critical value of 1.894, and a significance level of 0.300 ( $p > 0.05$ ). These results suggest that while higher labor participation may contribute to reducing poverty, the relationship is not statistically significant. Additionally, unemployment is found to have a positive but similarly insignificant effect on poverty, with a t-value of 0.010 and a significance level of 0.992 ( $p > 0.05$ ). These findings indicate that changes in labor force participation and unemployment rates do not have a significant direct impact on poverty levels in the region. The study contributes to the discourse on labor market dynamics and socioeconomic development, providing empirical evidence for policymakers in designing effective poverty alleviation strategies.

## 1. Introduction

**Poverty** is a phenomenon that affects nearly all developing countries and remains one of the most pressing economic issues requiring immediate attention. The government prioritizes poverty alleviation due to its wide-ranging and multidimensional negative impacts (Septiadi & Nursan, 2020). Poverty arises from the inability of individuals to manage their lives at a standard considered humane, resulting in reduced human resource quality. Consequently, productivity and income levels decline, perpetuating a cycle of poverty. Low income leads to limited access to quality education, healthcare, and nutrition, ultimately affecting intellectual and physical development and, in turn, reducing productivity.

According to Kristin and Darsana (2018), poverty is a condition where an individual lacks assets, has minimal income, and is unable to fulfill basic needs for a decent life, such as food, clothing, shelter, education, health services, clean water, and sanitation. Putri (2017) notes that poverty is influenced by various interrelated factors, including unemployment, education, health, community income levels, consumption, location, and environment.

Furthermore, Yanthi and Marhaeni (2015) describe poverty as both an absolute and relative condition in which individuals or groups are unable to meet their basic needs according to societal norms due to natural, cultural, or structural causes.

**Gowa Regency**, located in South Sulawesi Province, is one of the regions where poverty remains a central issue and is a key focus of government intervention. However, current poverty management efforts have not yet met expectations (Fadillah & Sabar, 2023). According to data from BPS (2023), poverty rates in Gowa Regency have fluctuated over the past decade, as shown in the table below:

**Table 1.1: Poverty Rate in Gowa Regency (2011–2022)**

Year	Percentage (%)
2011	8.55
2012	8.06
2013	8.73
2014	8.00
2015	8.27
2016	8.40
2017	8.42
2018	9.28

2019	9.14
2020	7.38
2021	7.54
2022	7.36

**Source: Central Bureau of Statistics (BPS), 2023**

Based on Table 1.1, the poverty rate in Gowa Regency decreased from 9.28% in 2018 to 7.38% in 2020. However, it rose slightly in 2021 to 7.54%, before dropping again to 7.36% in 2022.

**Unemployment** is one of the contributing factors to poverty in Gowa Regency. It refers to the portion of the labor force actively seeking but unable to find employment. Unemployment is a macroeconomic issue that directly impacts society and is considered a serious challenge (Febrianti et al., 2022). The unemployment rate in Gowa has also shown fluctuation over the past decade:

**Table 1.2: Open Unemployment Rate in Gowa Regency (2010–2021)**

Year	Percentage (%)
2010	7.75
2011	7.05
2012	4.01
2013	2.63
2014	2.30
2015	4.96
2017	4.96
2018	4.80
2019	4.35
2020	6.44
2021	4.30

**Source: Central Bureau of Statistics (BPS), 2023**

As seen in the table, the highest unemployment rate occurred in 2010 (7.75%), while the lowest was in 2014 (2.30%).

In addition to unemployment, **labor** is a key factor affecting poverty levels. Labor plays a critical role as a production factor influencing national income. An increase in the labor force participating in productive activities is assumed to lead to greater output. The labor force in Gowa Regency has increased in recent years, while the number of unemployed has fluctuated,

reflecting a rising population and the growing complexity of employment dynamics.

Economic progress in a country is closely tied to the productivity of its people. High productivity must be supported by sufficient investment and qualified human resources. Furthermore, efficient production processes are essential to ensure the economy operates at its optimal capacity (Widayati et al., 2019).

**Table 1.3: Labor Force Participation Rate in Gowa Regency (2010–2022)**

Year	Percentage (%)
2010	64.70
2011	65.60
2012	62.08
2013	64.17
2014	66.30
2015	58.33
2016	-
2017	62.17
2018	67.42
2019	66.52
2020	67.62
2021	68.89
2022	73.16

**Source: Central Bureau of Statistics (BPS), 2023**

The highest labor force participation rate was recorded in 2022 (73.16%), while the lowest was in 2015 (58.33%).

Labor is a crucial determinant of poverty. As a production factor, the number and productivity of workers directly impact national income. According to Irawan and Suparmoko (2008:119), the assumption that a larger workforce always leads to increased production is not entirely accurate, as productivity also depends on the quality of the labor involved.

## 2. Literature Review

### 2.1. Poverty

Poverty is a condition characterized by the inability to meet basic needs such as food, clothing, shelter, education, and healthcare. According to Maipita (2014), poverty can result from a lack of access to education and employment or limited resources. Todaro and Smith (2006) describe poverty as a global social

phenomenon wherein individuals fail to maintain a standard of living consistent with their community and are unable to utilize their potential productively. Annur (2013) adds that poverty often arises from unequal power structures and limited access to resources like land, education, and technology.

Itang (2015) identifies several causes of poverty:

1. Low educational attainment leading to insufficient skills.
2. Passive or indifferent attitudes toward work.
3. Depleted or non-beneficial natural resources.
4. Scarcity of job opportunities.
5. Lack of capital to utilize existing skills.
6. High family burdens that surpass income capacity.

According to Maipita (2014), poverty can be classified as:

1. Structural poverty: caused by systemic institutional barriers.
2. Natural poverty: due to low-quality human and natural resources.
3. Cultural poverty: influenced by attitudes and values.
4. Relative poverty: disparities between income groups.

The poverty line represents the minimum income level needed to meet essential needs. If income falls below this level, an individual is considered poor (Maipita, 2014). Factors affecting poverty are categorized into internal (personal attitude, health limitations) and external (social exclusion, limited access, insufficient employment) (Haliding, 2025). In rural areas, poverty stems from isolation and vulnerability, while in urban areas, it's often due to inadequate capital, limited technology access, and high population growth (Isdjoyo in Maipita, 2014).

## 2.2. Unemployment

According to BPS, unemployment refers to individuals who are jobless but actively seeking employment or preparing to start a business. Sukirno (2017) defines unemployment as a condition where people want to work but cannot find employment.

Simanjuntak (2003) considers the unemployed as those who have worked less than two days per week or are actively seeking jobs.

Putong (2013) highlights that unemployment typically affects working-age individuals, especially those not in school but beyond childhood age. Imbalances in labor supply and demand cause unemployment (Widiyanti, 2016). Types of unemployment (Sukirno, 2017):

1. Open Unemployment: when job growth lags behind labor force growth.
2. Hidden Unemployment: surplus labor not contributing efficiently, especially in agriculture.
3. Seasonal Unemployment: common in agriculture and fisheries due to seasonal cycles.
4. Underemployment: individuals working fewer hours than desired or appropriate for their skills.

## 2.3. Labor

According to Law No. 13 of 2003, labor refers to individuals capable of producing goods/services for personal or community needs. Alam (2014) defines labor as the population aged 17 to 60 actively working, while Hamzah (2014) includes both physical and mental workers inside or outside formal employment.

### **Labor classification (Poerwanto, 2013):**

1. Unskilled labor: lacks education and skills.
2. Skilled labor: possesses job-specific skills or experience.
3. Educated labor: holds advanced education and specialization.

### **Labor rights (Law No. 13/2003):**

1. Equal treatment without discrimination.
2. Access to job training and competency recognition.
3. Right to maternity leave and protection in case of miscarriage.
4. Right to fair wages, health and safety, social security, and freedom of association.

## 2.4 Framework of Thought

Poverty is a complex, multidimensional issue affecting individuals' ability to meet basic needs. Regional development plays a vital role in poverty reduction by improving living standards and increasing access to economic resources (Setiyawan, 2021). High unemployment levels exacerbate poverty by limiting income opportunities. Economic growth, which contributes to poverty alleviation, is influenced by labor productivity and market efficiency (Safitri et al., 2022).

According to Law No. 13 of 2003, labor includes all individuals capable of producing goods or services. The availability and quality of labor significantly impact regional poverty levels. Putong (2013) classifies the unemployed as working-age individuals without employment, underlining the relevance of unemployment in poverty studies. This study analyzes the effect of labor (X1) and unemployment (X2) on poverty (Y) in Gowa Regency.

## 2.5 Hypotheses

Based on the theoretical review, the following hypotheses are formulated:

1. **H1:** Labor has a negative and insignificant effect on the poverty rate in Gowa Regency.
2. **H2:** Unemployment has a positive and insignificant effect on the poverty rate in Gowa Regency.

## 3. Research Methods

### 3.1 Types of research

This study uses a quantitative research approach. Quantitative research is defined as a method used to analyze a population or sample through structured data collection and statistical analysis, aiming to test specific hypotheses (Sugiyono, 2014:11). The data analysis process utilizes software tools such as SPSS to interpret numerical data and generate conclusions. This method is suitable for research that requires statistical measurement of variable relationships. Additionally, the results are presented using tables, graphs, and other visualizations to enhance clarity.

## 3.2 Location and Time of Research

### a. Location

The research was conducted at the Central Statistics Agency (BPS) of Gowa Regency, chosen as the primary data source due to its credibility and accessibility in providing time series statistical data.

### b. Time

The research was conducted over a period of two months, from March to April 2024.

## 3.3. Data Types and Sources

### a. Type of Data

The data used in this research is **secondary data**, which refers to data obtained indirectly from documented sources or institutions not directly collecting it for this research (Sugiyono, 2014:138).

### b. Data Sources

The secondary data were collected from published reports by the Central Statistics Agency (BPS) of Gowa Regency. The data span 10 years, from 2014 to 2023, and cover variables such as labor force size, unemployment rates, and poverty levels.

## 3.4 Population and Sample

### a. Population

The population in this study includes all time-series data related to labor, unemployment, and poverty rates in Gowa Regency available from 2014 to 2023. The population is derived from official statistical records provided by BPS.

### b. Sample

The sample consists of annual data for a period of ten years (2014–2023). This time series sample is selected to represent trends and relationships over time within the population.

## 3.5. Data Collection Technique

The data collection technique involves systematic documentation of secondary time-series data from BPS publications. The process includes compiling, coding, and organizing annual data on labor, unemployment, and poverty levels. Additional supporting materials were gathered from academic references such

as books, peer-reviewed journals, and credible online sources.

### 3.6. Operational Definition of Variables

Variables are attributes or characteristics that vary and are measured in the research process (Sugiyono, 2014). This study includes one dependent variable and two independent variables:

Variable	Type	Indicator	Unit	Data Source	Scale
<b>Poverty Rate (Y)</b>	Dependent	Percentage of population below poverty line	Percent (%)	BPS Gowa Regency	Ratio
<b>Labor Force (X1)</b>	Independent	Labor Force Participation Rate (LFPR)	Percent (%)	BPS Gowa Regency	Ratio
<b>Unemployment (X2)</b>	Independent	Open Unemployment Rate	Percent (%)	BPS Gowa Regency	Ratio

The poverty rate reflects the proportion of individuals living below the poverty line as defined by national standards. Labor force is measured using the Labor Force Participation Rate, while unemployment is measured using the Open Unemployment Rate.

## 4. Results and Discussion

### 4.1 Research Result

#### a. Description of Research Variables

This study examines one dependent variable, the **poverty rate**, and two independent variables: **labor** and **unemployment**.

##### 1. Labor

Labor refers to individuals aged 15 years and above who are capable of producing goods and services when employment opportunities

exist. An increase in the number of employed individuals contributes positively to economic growth and can potentially reduce poverty.

**Table 4.1**

#### Labor Force in Gowa Regency (2014–2023)

Year	Number of Workers (%)
<b>2014</b>	66.30
<b>2015</b>	58.33
<b>2016</b>	58.33
<b>2017</b>	62.17
<b>2018</b>	67.42
<b>2019</b>	66.52
<b>2020</b>	67.62
<b>2021</b>	68.89
<b>2022</b>	73.16
<b>2023</b>	69.63

**Source:** BPS Gowa Regency, 2024

Based on Table 4.1, the labor force in Gowa Regency fluctuated between 2014 and 2023.

### 2. Open Unemployment

Unemployment occurs when individuals are actively seeking work but are unable to find employment. High unemployment reduces national income, which in turn lowers demand for goods and services and ultimately reduces the need for labor.

**Table 4.2**

#### Open Unemployment Rate in Gowa Regency (2014–2023)

Year	Unemployment Rate (%)
<b>2014</b>	2.30
<b>2015</b>	4.96
<b>2016</b>	4.96
<b>2017</b>	6.14
<b>2018</b>	4.80
<b>2019</b>	4.35
<b>2020</b>	6.44
<b>2021</b>	4.30
<b>2022</b>	3.26
<b>2023</b>	3.43

**Source:** BPS Gowa Regency, 2024

The highest unemployment rate occurred in 2020 (6.44%) due to the COVID-19 pandemic. The lowest rate was in 2014 (2.30%), reflecting greater job availability during that year.

### 3. Poverty Rate

Poverty remains a significant issue in Gowa Regency. Despite various policy interventions, the poverty rate has fluctuated over the past decade.

**Table 4.3**

**Poverty Rate in Gowa Regency (2014–2023)**

Year	Poverty Rate (%)
2014	8.00
2015	8.27
2016	8.40
2017	8.42
2018	9.28
2019	9.14
2020	7.38
2021	7.54
2022	7.36
2023	7.42

Source: BPS Gowa Regency, 2024

The highest poverty rate was recorded in 2018 at 9.28%, while the lowest was in 2022 at 7.36%. The decline from 2020 to 2023 was partly influenced by a shift to remote work and increased engagement in online microenterprises.

#### b. Multiple Linear Regression Analysis

Multiple linear regression was employed to analyze the effect of labor and unemployment on poverty rates. This analysis uses SPSS 25 to perform both partial and simultaneous hypothesis testing.

**Table 4.4**

**Multiple Linear Regression Results**

Variable	B	Standard Error	t	Significance	Tolerance	VIF
(Constant)	12.225	4.175	2.926	.002		
Labor	-0.062	0.056	-1.106	.272	0.814	1.229
Unemployment	0.002	0.002	0.777	.439	0.814	1.229

Unemp	0.0	0.0	0.0	0.9	0.81	1.229
loyme	0.02	0.021	0.001	0.09	0.4	2.229
nt		0.02	0.04	0.02		9

Source: SPSS Processed Data, 2024

The resulting regression equation:

$$Y = 12.225 - 0.062X_1 + 0.002X_2$$

Interpretation:

- A 1% increase in labor reduces poverty by 0.062%, though insignificantly.
- A 1% increase in unemployment increases poverty by 0.002%, also insignificantly.

#### c. Classical Assumption Tests

##### 1. Normality Test

Using the Kolmogorov–Smirnov test, the data distribution was found to be normal as indicated by the residuals aligning with the normal curve.

##### 2. Heteroscedasticity Test

The scatterplot shows no clear pattern or funnel shape, indicating no heteroscedasticity.

##### 3. Multicollinearity Test

Based on the tolerance values (>0.1) and VIF values (<10), no multicollinearity exists between independent variables.

**Table 4.5**

Variable	Tolerance	VIF
Labor	0.814	1.229
Unemployment	0.814	1.229

#### Autocorrelation Test

Using the Runs Test:

**Table 4.6**

Z Value	Sig. (2-tailed)
-1.006	0.314

As the significance value is greater than 0.05, no autocorrelation is present.

#### e. Hypothesis Testing

##### 1. F-Test (Simultaneous Test)

**Table 4.7**

F Value	Sig.
0.777	0.496

Since the significance is > 0.05, labor and unemployment do not jointly affect the poverty rate.

## 2. *t-Test (Partial Test)*

- Labor ( $X_1$ ):  $t = -1.120 < 1.894$ , Sig. =  $0.300 > 0.05 \rightarrow$  no significant effect.
- Unemployment ( $X_2$ ):  $t = 0.010 < 1.894$ , Sig. =  $0.992 > 0.05 \rightarrow$  no significant effect.

## 3. *Coefficient of Determination ( $R^2$ )*

$R^2 = 0.182$  indicates that 18.2% of the variation in poverty is explained by labor and unemployment.

## 4.2 Discussion

### 1. The Influence of Labor on Poverty Rates in Gowa Regency

Based on the results of this study, the workforce has a negative and insignificant effect on the poverty rate in Gowa Regency. This is proven by the calculated  $t$  -1.120 which is smaller than the  $t$  table of 1.894 ( $-1.120 < 1.894$ ) with a significance value of 0.300 which is greater than 0.05 ( $0.300 > 0.05$ ). This means that the workforce has no significant effect on the poverty rate in Gowa Regency. In addition, the coefficient shows a negative value. This means that the workforce does not affect the poverty rate in Gowa Regency. Based on this, the hypothesis stating that the workforce is significant to the poverty rate in Gowa Regency is rejected.

This is in accordance with previous research conducted by Sari, Janita (2021) with research results showing that the workforce had a negative and insignificant effect on poverty levels. From the calculation results using the coefficient table, the  $t$  table value is obtained which is greater than the calculated  $t$  at a certain level of significance. Therefore, it can be concluded that the labor variable has a negative and insignificant effect on the Poverty Rate in Gowa Regency. The negative effect of the labor variable means that every decrease in one unit of the labor variable will increase the Poverty Rate. This also applies vice versa, where an increase in one unit of the labor variable will decrease the Poverty Rate. Insignificant means that the number of Labor has a small effect on the Poverty Rate.

## 2. The Impact of Unemployment on Poverty Rates in Gowa Regency

Unemployment has a positive and insignificant effect on the Poverty Rate in Gowa Regency. This can be seen from the results of the regression analysis conducted where the coefficient shows the  $t$ -count value of Unemployment obtaining a  $t$ -count value of 0.010 smaller than the  $t$  table of 1.894 ( $0.010 < 1.894$ ) with a significance value of 0.992 which is greater than 0.05 ( $0.992 > 0.05$ ) this means that the variable  $X_2$  Unemployment has a positive and insignificant effect on the variable  $Y$  Poverty Rate.

This is in accordance with previous research conducted by Chaerani Alimuddin (2016) which stated that the findings obtained from the results of this study were the results of a regression test, namely that the level of poverty can be said to have a positive and significant effect on poverty in Makassar City.

## 5. Closing

### 5.1 Conclusion

Based on the results of data analysis regarding the influence of labor and unemployment on the poverty rate in Gowa Regency, the following conclusions can be drawn:

1. The labor force has a negative but statistically insignificant effect on the poverty rate in Gowa Regency. This is supported by the results of the  $t$ -test, where the significance value is 0.300 (greater than 0.05) and the  $t$ -value is -1.120 (less than the critical value of 1.894).
2. Unemployment has a positive but statistically insignificant effect on the poverty rate in Gowa Regency. This is indicated by the  $t$ -test results showing a significance value of 0.992 (greater than 0.05) and a  $t$ -value of 0.010 (less than 1.894).
3. Simultaneously, the labor force and unemployment variables do not have a significant influence on the poverty rate in Gowa Regency, as reflected by the  $F$ -test results with a significance value of 0.496 ( $> 0.05$ ).

## 5.2 Suggestions

Based on the conclusions above, the following suggestions are proposed:

1. The Government of Gowa Regency is encouraged to strengthen development strategies focused on poverty alleviation by enhancing social protection programs and promoting employment through increased investment in labor-intensive sectors.
2. Relevant government agencies are advised to improve infrastructure in the education, health, and economic sectors to enhance the quality of human resources, create wider job opportunities, and accelerate economic development in the region.
3. Future research is recommended to include other influential variables on poverty, such as Gross Regional Domestic Product (GRDP), education level, Human Development Index (HDI), and minimum wage, to gain a more comprehensive understanding of poverty determinants.

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