

Analysis of Determinants of Labor Force Participation Rate in Bone District

Winda¹, Madris², Sabir³

Faculty of Economics and Business, Hasanuddin University

E-mail: windaw086@gmail.com, madris@fe.unhas.ac.id, sabirfeuh@gmail.com

Abstract

This study aims to analyze the factors that influence the level of workforce participation in the Bone Regency. The variables observed in this study were the level of labor force participation as the dependent variable and then economic growth, state minimum wage and average years of schooling as the independent variables. This study used secondary data obtained from the Central Bureau of Statistics and the Human Resources Department of the Bone Regency from 2004 to 2019. The analytical method used was multiple linear regression using IBM SPSS ver 23. The results of this study show that economic growth has a positive and significant effect on Bone Regency labor force participation, state minimum wage has no effect on Bone Regency labor force participation, and grade level has a negative and significant effect on Bone Regency labor force participation.

Keywords | Determinants, Labor, Force Participation Rate.

INTRODUCTION

Population size is one of the most important capitals of development. High-quality residents, both physically and mentally, with the right skills and competencies, make a significant contribution to development. Residents can act as both subject and object in development. As the subject of development, the people can actively participate in economic activities as the labor force, and as the target of development, they can act as beneficiaries of the results of development. However, population growth leads to population and employment problems, as even a large population has limited employment opportunities and cannot absorb all the available labor force.

The economically active population can be explained by an indicator called the Labor Participation Rate (TPAK). TPAK represents the ratio of the number of people in the working age category (15+) to the number of people in the labor force category. The working-age population is the population aged 15 and over (Central Bureau of Statistics). The labor force, on the other hand, refers to her population aged 15 and over who are in specific jobs in the economy and those who are not working but looking for work (Simanjuntak, 2001).

The employment issue is one of the major issues that must be addressed in the region's development. Human resources play a very important role in planning economic development. The development process cannot run without workers. Workers in this context are men and women in the labor force.

Especially in the Bone Regency, it is known to be the third most populous after Makassar and Gowa. Based on the Central Bureau of Statistics (BPS) data in 2019, the population of the Bone Regency is increasing every year, with a total population of 754,894 in 2018, with 360,971 males (TPAK 77.67 percent) and 393,923 females (TPAK



77.67 percent). 39.59 percent). In 2019, the population was 758,589, with 363,030 males, TPAK of 80.26%, and females of 395,559, with a TPAK of 42.06% when compared to the labor force participation rate by gender and level. The female labor force participation rate is significantly lower than the male labor force participation rate. Low female labor force participation is due to family responsibilities that require women to participate fully in household chores, especially domestic chores (ILO, 2015).

The level of labor force participation is an interesting and important research subject for determining local employment potential and is also one of the most important indicators for assessing the participation of human resources in a country's development, both at the local and national level. Table 1.1 below shows labor force participation rates in the Bourne Regency over the past decade.

Table 1.1 Labor Force Participation Rate in Bone Regency 2010-2019

Year	Labor Force (Soul)	Working Age Population (Soul)	Labor Force Participation Rate (%)
2010	325.112	502.741	64.67
2011	327.771	511.945	64.02
2012	333.803	541.845	64.84
2013	322.922	510.108	63.30
2014	339.427	530.851	63.94
2015	347.928	535.763	64.94
2016	332.603	541.494	61.46
2017	317.278	547.225	57.98
2018	316.146	551.785	57.30
2019	332.903	556.317	59.84

Source: Central Bureau of Statistics (processed)

Table 1.1 above shows the evolution of labor force participation rates in the Bourne Regency from 2010 to 2019. We can see that the labor force participation rate has fluctuated and is trending downward. The highest labor force participation rate was 64.94 percent in 2015 and the lowest labor force participation rate was 57.30 percent in 2018. Looking at the data, while the working-age population is increasing year by year, the labor force population is decreasing in 2017 and 2018, and the decline in the labor force participation rate is also having an impact.

The decline in the labor force participation rate is due to the fact that the growth rate of the working-age population does not match the growth rate of employment and employment opportunities, leading to an increase in the number of unemployed. Second, the increase in the labor force is not due to high labor productivity, superior skills and abilities in the labor force, and available employment opportunities are not aligned with workers'

skills. There is also an increasing number of people of working age who should be willing to work. However, the majority of the population chooses to attend school and keep a home. As more people go to school and take care of their homes, labor force participation declines.

Changes in the labor force participation rate can be influenced by several factors, such as economic growth. This is consistent with his work by Nindya E (2008) who showed that high economic growth leads to high labor force participation rates. This means that when economic growth accelerates significantly, the number of people involved in the labor market will increase.

In addition to economic growth, minimum wages can also affect labor force participation. According to Sukirno (2003), wages are a factor considered important because they are the reason why a part of the labor force enters the labor market. A high wage share means that more people (workers) enter the labor market and the labor force participation rate increases.

Average length of education and labor force participation rate both have a large impact. According to Simanjuntak (2001), the average length of education shows that the more formal education a person has, the more expensive that time is. People who consider their time expensive tend to replace their free time with work.

LITERATURE REVIEW

Employment theory

Regarding the concept of employment, the main issues to be discussed are closely related to human resources (HR). Human resource or manpower has two meanings. First, human resources include the meaning of work or services that can be performed in the production process. Human resources, in this case, reflect the quality of effort a person expends in a given amount of time to produce goods and services. Her second definition of human resources concerns people who can work to provide a service or workload. Being able to work means being able to engage in economically valuable activities that produce goods and services that meet the needs of society. Physically, the ability to work is measured by age. In other words, people of working age are assumed to be able to work. This group of working-age people is known as the workforce. Notation of written mathematical equations should be included at the end of the article before the Bibliography and given the unit (SI).

Labor Participation Rate (TPAK)

According to Mulyadi (2003), the labor force participation rate (TPAK) is a situation that expresses the total labor force of a common group as a percentage of the population of that age group. According to the Central Bureau of Statistics (2016), the Labor Force Participation Rate (TPAK) is the share of the labor force in the population aged 15 and above.



Labor participation rate (TPAK)

According to Sulyadi (2003), the labor force participation rate (TPAK) is a situation that expresses the total labor force of a common group as a percentage of the population of that age group. According to the Central Bureau of Statistics (2016), the Labor Force Participation Rate (TPAK) is the percentage of the population aged 15 and above in the labor force.

The labor force participation rate is an age group, or labor force to labor force comparison that represents the size of the labor force as a fraction of the human population belonging to that age group (Nainggolan, 2009). Thus, the labor force participation rate can be formulated as (Mantra, 2000).

$$TPAK = \frac{\text{Jumlah Angkatan Kerja}}{\text{Jumlah Penduduk Usia Kerja}} \times 100\%$$

The labor force participation rate (TPAK) itself is an employment indicator that provides an overview of the population who are economically active in their daily activities referring to a time during the survey period. The greater the number of residents who are classified as not in the labor force, the smaller the number of labor force which results in a smaller TPAK (Payaman J Simanjuntak, 2005).

Labor Offerings

According to Alida et al. (2015) there are two types of labor supply: short-term offers and long-term offers. Short-term supply is an economy that supplies the entire supply of labor, and the results of individual working hours choices and participation decisions are reflected in the supply of labor in the market. Long-term supply, on the other hand, is the concept of adjustment to changes in the environment, and adjustments are made in the form of changes in population and labor force participation rates.

The supply of employment is influenced by individuals' decisions to work or not. This decision is driven by an individual's behavior in how they use their time, whether for work or other leisure activities (unproductive but expensive), or a combination of both. When it comes to wage levels, the decision to work for someone is also influenced by income level. That is, when relative labor income is sufficiently high, the labor force tends to reduce the time allotted to work. This rotates the shape of the supply curve to the left, known as the backbending supply curve (Sumarsono, 2003). The figure below shows the labor supply curve.

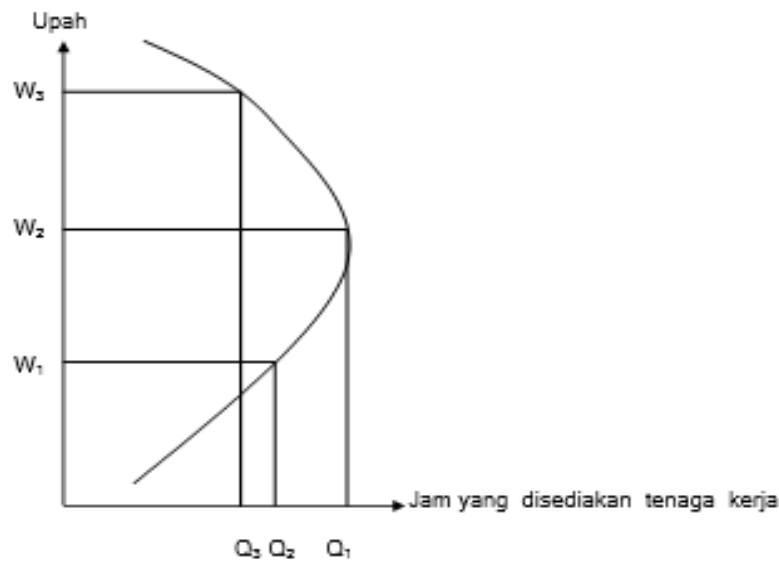


Figure 1.1 Labor Supply Curve

The supply curve for labor has a backward curving part. At a certain wage level, the provision of individual work time will increase if wages increase (from W_2 to W_3). After reaching a certain wage (W_3), the increase in wages actually reduces the time provided by individuals for work purposes (from Q_1 to Q_3). This is called the Backward Bending Supply Curve.

Economic growth

Economic growth is a process of increasing output per capita in the long term. In this sense the theory must include theories regarding the growth of per capita output and theories regarding population growth. Because only when these two aspects are explained can the development of output per capita be explained. Then the third aspect is economic growth in the long-term perspective, that is, if during a sufficiently long period of time the output per capita shows an increasing trend (Boediono, 1999).

Minimum wage

According to Sadono Sukirno (2005), wages are remuneration for services received in the form of money by a person in an employment relationship through an employment arrangement, remuneration for services intended to meet the needs of oneself and one's family. The definition of wages in economic theory is payment for various kinds of services provided and provided by an employer to an employee.

Education

Education is one of the important elements in human resource development. Education not only broadens knowledge, but also improves job skills, thereby increasing labor productivity. Education is viewed as an investment that may pay off in the form of higher jobs and higher incomes in the years to come (Simanjuntak, 2000).



Devitasari (2010) argues that education plays an important role in improving labor productivity, as education-based labor productivity improvement is essentially aimed at improving human employability and human living standards.

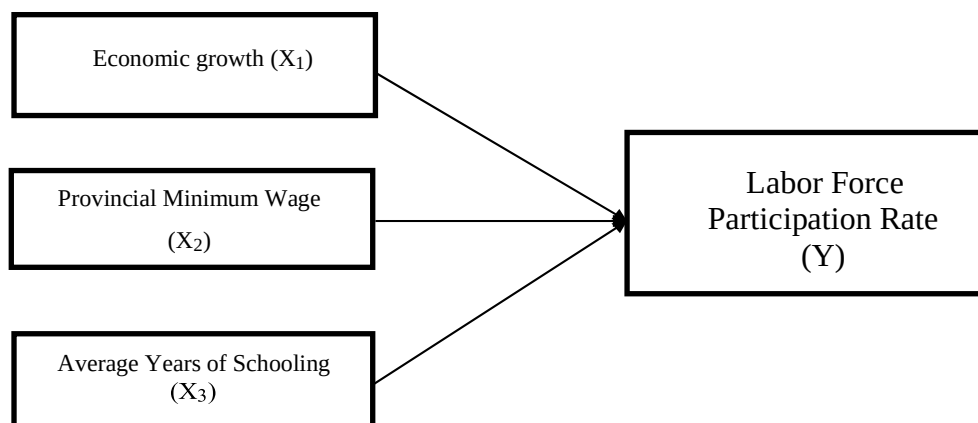


Figure 1.2 Research Conceptual Framework

Research hypothesis

Based on the literature review that has been described above and based on previous studies, the research hypothesis can be formulated as follows:

1. It is suspected that economic growth has a positive effect on the level of labor force participation in Bone Regency.
2. It is suspected that the provincial minimum wage has a positive effect on the labor force participation rate in Bone Regency.
3. It is suspected that the average length of schooling has a positive effect on the labor force participation rate in Bone Regency.

METHODS

The scope of this study includes the effect of economic growth, the provincial minimum wage and the average length of schooling on the labor force participation rate in Bone Regency.

The type of data used is secondary data. This is a time series containing data on labor force participation, economic growth, state minimum wages, and average years of schooling for the period 2004-2019. Data sources for this study were obtained from multiple sources, including the Bone Regency Central Statistics Agency (BPS) website and various research-related websites.

The data collection method used in this study is a literature survey. H. Analysis to obtain information from the literature relevant to the research subject (both in the form of BPS statistical books, journals and papers related to this study).

The analytical method in this study uses multiple linear regression methods. This method shows the relationship between the independent variable and the dependent variable. This model is used to see the effect of economic growth, provincial minimum wage and average length of schooling on the labor force participation rate in Bone District. The reduced form in this analysis is as follows:

$$Y = f(X_1, X_2, X_3) \dots \dots \dots (3.1)$$

Information:

Y = Labor Force Participation Rate

X₁ = Economic Growth

X₂ = Provincial Minimum Wage

X₃ = Average Years of Schooling

Equation (3.1) can be expressed in the form of the Cobb-Douglas function as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mu \dots \dots \dots (3.2)$$

The non-linear equation (3.2) can then be transformed into linear in the form of natural logarithms (ln) as in the following linear regression estimation equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 \ln X_2 + \beta_3 X_3 + \mu \dots \dots \dots (3.3)$$

Information:

β_0 = Constant

β_1 = Effect of Economic Growth on Labor Force Participation Rate in Bone Regency.

β_2 = Effect of Provincial Minimum Wage on Labor Force Participation Rate in Bone Regency.

β_3 = The Effect of Average Length of School on the Labor Force Participation Rate in Bone Regency.

μ = Error Term

RESULTS AND DISCUSSION

Based on the results of the estimation and analysis of the data above, the implication of the factors influencing the labor force participation rate in Bone Regency is then carried out. The results of the analysis in question and the findings from previous studies are as follows:

Analysis of the impact of economic growth on the labor force participation rate

The regression results show that economic growth has a significant positive impact on the labor force participation rate. This is shown by a regression coefficient of 1.765 and a significance value of 0.008, which is less than 0.05. It can be said that for every 1% increase in economic growth, the labor force participation rate increases by 1,765%. Because high and stable economic growth indicates good economic activity. As the economy of the Bourne Regency continues to grow, it is encouraged to become a worker and enjoy development as a public concern. so that the labor force participation rate rises. Increased economic growth will also affect the expansion of employment opportunities, increase the working population, and in turn increase the labor force participation rate.

Empirical evidence indicates that the Bone Regency exhibits a pattern of one-way relationships between economic growth and labor force participation levels, and that the



sectors considered by the GRDP by fixed-price business lines remain the sectors that contribute most to the Bourne Regency's economic growth, dominated by the agricultural sector. In this case, the agricultural sector remains the main supporting sector for labor absorption in the Bourne Regency. So, boosting economic growth boosts employment.

Analysis of the impact of state minimum wages on labor force participation rates

Regression results show that state minimum wages have no effect on labor force participation rates. This is indicated by a significant value of 0.897, which is greater than 0.05. It can be said that changes in the national minimum wage do not affect the labor force participation rate. This is because the Bourne Regency's working-age population does not consider the minimum wage increase when looking for or accepting jobs. Furthermore, the main employment status of the Bourne Regency's working-age population is still dominated by the informal sector compared to the formal sector, as a large portion of the population is occupied by workers with lower levels of education. This is about the informal sector and no high level of education is required to work in this sector. To keep the Bourne Regency's working-age population oblivious to the state's minimum wage, businesses tend to reduce labor demand because raising the minimum wage puts a strain on businesses.

In theory, companies only pay wages according to their productivity. In other words, less productive workers receive lower wages and vice versa. At the national level, the informal sector is the sector that absorbs the most labor but the lowest labor productivity, while the formal sector absorbs the least labor but the highest labor productivity.

Analysis of the effect of average years of schooling on the labor force participation rate

Regression results show that average length of schooling has a significant negative impact on labor force participation. This is shown by a regression coefficient of -4.853 and a significance value of 0.046, which is less than 0.05. We can say that for every 1% increase in the average school enrollment rate, the labor force participation rate decreases by -4,853%. This is because the education situation in the Bourne Regency is improving year by year, as evidenced by an increase in the number of her residents over the age of 15 who remain in school and an increase in the average enrollment of the population. This condition indicates that the longer the average length of schooling of the population, the lower the labor force participation rate. This is because the higher the average years of schooling or the larger the inactive population, the lower the labor force participation rate.

CONCLUSION

The results of estimating the effects of economic growth, state minimum wages, and average length of school attendance on the labor force participation rate are as follows.

1. Economic growth has a positive and significant impact on labor force participation in the Bourne Regency. Increased economic growth leads to increased labor force participation in the Bourne Regency.
2. State minimum wages have no effect on Bourne Regency activity rates. This is because the Bourne Regency's working-age population does not consider the minimum wage

increase when looking for or accepting jobs. This is reflected in the higher number of workers working in the informal sector compared to the formal sector.

3. The average length of schooling has a negative and significant impact on labor force participation in the Bourne Regency. The results of this study suggest that increasing the average length of schooling will lead to lower labor force participation rates in the Bourne Regency. This is because the more averagely schooled and inactive population groups, the lower labor force participation in the Bourne Regency.

REFERENCES

- Annisa Luthfiana Pratiwi. 2018. The Effect of Education, City Minimum Wage, and Gross Regional Domestic Product on the Labor Force Participation Rate (TPAK) in East Java Province in 2012-2015. Jember: University of Jember.
- Arida, et al. 2015. Analysis of Labor Demand and Supply in the Agricultural Sector in Aceh Province. Agrisep Vol 16 No. 1.
- Arizka Sofiyana Maharani. 2017. Analysis of the Factors Influencing the Level of Labor Force Participation on the Island of Borneo. Journal: Indonesian Islamic University. Vol 2.
- Boediono. 1999. Economic Growth Theory. BPFE, Yogyakarta.
- Case and Fair. 2004. Principles of Macroeconomics. Index: Jakarta. Dumairy. 2000. The Indonesian Economy, Jakarta: Erlangga.
- Edy, Irwan Christanto. 2009. Analysis of the Effect of Education on Human Resources (HR) on Unemployment in Dati I Province, Central Java Province. Journal of business and banking economics, Vol 17, no 4.
- Fahmi, Fajar Nur. 2007. The Role of Small Industry on Labor Absorption in Lamongan Regency. Malang: Brawijaya.
- Fiki Dwi Ramadayanti & Hudiyanto. 2016. Analysis of the Factors Influencing the Level of Labor Force Participation in Indonesia in 2010-2015. Yogyakarta: Yogyakarta Muslim University.
- Gianie, 2009. The Influence of the Minimum Wage on Labor Absorption in the Industry and Trade Sector. Jakarta: University of Indonesia.
- Inspiration. 2011. The Effect of Economic Growth and Wages on the Participation Rate of the Makassar City Women's Workforce in the 2000-2009 Period. Unhas. Thesis. Macassar.

