

THE EFFECT OF EDUCATION LEVELS, MINIMUM WAGE AND INFLATION ON UNEMPLOYMENT LEVELS IN AREA EAST INDONESIA

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KeyWords

Education, Minimum Wage, Inflation, Labor Productivity, Unemployment

ABSTRACT

This study aims to examine the effect of education level, minimum wage and inflation on unemployment rate through labor productivity in Eastern Indonesia. The data used is secondary data obtained from the Central Statistics Agency. The data in this study are panel data from 2015-2019. In this study, using the simultaneous regression analysis method with the Amos program.

The findings of this study indicate that education directly and indirectly through labor productivity has a positive effect on unemployment. Meanwhile, wages directly have a negative and insignificant effect on the unemployment rate. However, indirectly it has a positive and significant effect on the unemployment rate through labor productivity. Then, inflation directly has a positive effect on the unemployment rate. However, inflation indirectly has a negative effect on unemployment through labor productivity. And labor productivity directly has a negative effect on the unemployment rate.

I. Introduction

One of the problems faced by almost all countries is the problem of unemployment. There are many factors that lead to unemployment, the most common of which is low employment opportunities in a country, namely the high demand for labor that is not balanced with the number of jobs available. In addition, the existence of imperfect information on the labor market is another cause of unemployment. Often job seekers need a lot of time to find a job that suits their needs and skills. Likewise, companies wishing to recruit new workers often use considerable resources for the selection of suitable individuals (Arshad, 2015).

The open unemployment rate in the Western Region of Indonesia has decreased consistently every year, in 2015 the open unemployment rate in the Western Region of Indonesia was 6.46% decreasing to 5.21% in 2019. Meanwhile in Eastern Indonesia the unemployment rate was still fluctuating and had not shows a consistent decline every year, in 2015 the open unemployment rate in Eastern Indonesia of 5.85% decreased to 4.35% in 2016, and again increased in 2017 to 4.89%, then decreased slowly until 2019 amounting to 4.49% (BPS, 2020).

Human capital theory is seen as being able to solve the unemployment problem. Education plays an important role in increasing the quantity and quality of a number of individual practical knowledge and skills. This capital then makes these individuals more employable and on the whole will be more innovative and thus more competitive in the global market, (Gupta et al, 2016). Apart from education, wages are believed to be able to solve unemployment problems. According to Ehrenberg and Smith (2018), paying higher wages can attract better employees by enlarging the pool of applicants in the company. The higher the wages received,

the workers will be motivated and continue to improve their skills so that workers are less likely to quit, and will reduce unemployment (Dritsaki, 2016).

The provincial minimum wage in Eastern Indonesia experienced a significant increase during 2015-2019. In 2019, Papua Province was the province with the highest minimum wage of IDR 3,240,900, followed by North Sulawesi Province which was in second place with IDR 3,051,076. Meanwhile, East Nusa Tenggara and West Nusa Tenggara Provinces are the provinces with the lowest minimum wages in Eastern Indonesia. In 2019 the minimum wage in East Nusa Tenggara and West Nusa Tenggara Provinces was IDR 1,793,293 and IDR 2,012,610 respectively (BPS, 2020). The increase in minimum wages in Eastern Indonesia during 2015-2019 proves that wages tend to be rigid and cannot adjust downward. The minimum wage set by the government keeps wages rigid in the labor market. High wages make companies need a small workforce and lay off many workers, resulting in unemployment. One of the phenomena that exist in the current digitalization era is the acceleration of technological changes, especially those related to computerization and automation. It is undeniable that this change causes a decrease in the demand for workers with low education and skills, especially in developed countries, and it is possible that in Indonesia there will be an increase in unemployment for those with low levels of education (Dritsaki, 2016).

A high level of education will increase the knowledge and skills possessed by the community which helps in increasing productivity and income. Labor productivity is closely related to the unemployment rate, this is because high productivity indicates an increase in demand for labor. Most of the labor productivity in Eastern Indonesia during 2015-2019 has increased. Until 2019, West Papua Province had the largest worker productivity, namely 142,123. followed by South Sulawesi and North Sulawesi Provinces, which were in second and third place, 84,026 and 78,878, respectively. Meanwhile, East Nusa Tenggara and West Nusa Tenggara Provinces are the provinces with the lowest labor productivity in Eastern Indonesia, 28,225 and 39,041, respectively (BPS, 2020).

The inflation rate in Eastern Indonesia is still fluctuating and has not shown a consistent decline every year. Until 2019, West Papua province was the province with the highest inflation rate of 3.52%, followed by North Sulawesi and Maluku Provinces which were in second and third place at 3.52% and 3.24%, respectively. Meanwhile, Papua and East Nusa Tenggara Provinces are the provinces with the lowest inflation rates, namely 0.63% and 0.67% (BPS, 2020).

II. Theoretical Review

One of the reasons for the job requires time to match the worker to the job. The labor market equilibrium model assumes that all workers and all jobs are identical, so that all workers are suitable for all jobs. If this is true and the labor market is in equilibrium, then job losses do not lead to unemployment, workers who leave their jobs will immediately find new jobs at market wages (Mankiw, 2007). However, the reality is that workers have different preferences and abilities and jobs that have different styles. Meanwhile, the flow of information on prospective employees and job vacancies is imperfect, and the geographic mobility of workers is not instantaneous. For all of these reasons, finding a job that is on time and effort and tends to reduce the rate of job finding (Mankiw, 2007).

Every different job, of course, requires different skills and provides different wages, so unemployed people may not accept the first job offered. Unemployment caused by the time it takes people to find work is referred to as frictional unemployment (Orhan, 2017). In a situation of labor market equilibrium, there will still be frictional unemployment, this is because some people are between jobs. Frictional labor markets are characterized by imperfect information flows, and it takes both workers and employers time and effort to find each other. Even if the size of the labor force is constant over time, there will be new entrants into the labor market looking for work, while others who are employed or unemployed leave the labor force (Ehrenberg and Smith, 2018).

Economists refer to changes in the composition of demand between industries or regions as sectoral shifts. Because sectoral shifts always occur, and because it takes time for workers to change jobs, frictional unemployment always occurs. Sectoral shifts are not the only cause of layoffs and frictional unemployment. In addition, workers can be laid off when their company goes bankrupt, when their performance deteriorates, or when their skills are no longer needed. Workers can also leave their jobs to change careers or move to other areas. Whatever the cause of termination, workers need time and effort to find a new job. As long as the supply and demand for labor among companies changes, frictional unemployment cannot be prevented (Rizwanul, 2015).

Educational attainment is an important determinant of individual employability, and an important part of the human capital they can offer in the labor market. Therefore, it is not surprising that policymakers look into the education system for solutions to unemployment problems (Lauer, 2005). Higher levels of education are positively correlated with greater labor force participation with better performance in the labor market. When the level of education rises, the unemployment rate will decrease. People with education attainment below secondary level are twice as likely to experience unemployment as people who have secondary education and above (Cahuc and Zylbergberg, 2004). Education plays an important role in increasing the quantity and quality of a number of individual practical knowledge and skills. This capital then makes these individuals more employable and on the whole will be more innovative and thus more competitive in the global market (Gupta et al, 2016). Low-skilled workers will disappear from work faster than high-skilled individuals. Long-term unemployment affects disproportionately badly qualified adults (Checchi et al, 2004).

Education is an investment in building a better economy. The higher a person's education, the hope is to get a better job. With education, more knowledge and skills will be acquired, those with better knowledge and skills will find it easier to get jobs, either working for other people or opening their own businesses, so that the unemployment rate can be reduced. In other words, education will reduce the unemployment rate. The level of education is very important in explaining instability in employment and difficulties in finding a job. A lower level of education is the greater the risk of experiencing unemployment, not only because it is less likely to keep a job but also because it is more difficult to find others (Acosta et al., 2014).

Minimum wages contribute to higher labor productivity at both the firm level and the aggregate economic level. At the company level, workers are motivated to work harder, they will also stay longer in the company, gain valuable experience and also encourage companies and employees to engage in productivity improvement training. At the level of the aggregate economy, the minimum wage can result in more productive firms replacing unproductive firms and firms that survive becoming more efficient. This mechanism can increase overall economic productivity (Fatma, 2017). The phenomenon of wages currently occurring is high wages and high competitiveness. Wages are not only seen as a production cost but also as part of an effort to improve welfare and work motivation. The firm's income can increase even if it pays wages above the market equilibrium level. Paying higher wages can attract better employees by enlarging the pool of applicants in the company. A larger pool means that companies can be more selective about selecting the most experienced, reliable, or highly motivated applicants. The higher the wages received by workers, the less likely workers will quit, thus reducing unemployment (Ehrenberg and Smith, 2018).

The relationship between inflation and unemployment is described in the Phillips curve, which explains the trade off or negative relationship between inflation and unemployment. When unemployment is high, the price increases are relatively slow, however the lower the unemployment the higher the prevailing inflation rate. Many economists feel that there are some risks involved as the unemployment rate falls to closer to 5%. There are those who perceive an unemployment rate below 5% as unsustainable, or at least incompatible with low continued inflation rates. It may seem strange that an economy with low unemployment and low inflation can be considered a source of concern (Vermeulen, 2017).

The relationship between labor productivity and unemployment starts from the statement that the wages offered by companies are directly related to worker productivity. It is assumed that there is an increase in economic productivity which workers are not aware of. Higher productivity makes it more attractive for firms to increase employment and enables this by increasing the wages offered to workers. This, in turn, increases the likelihood that the average worker will find acceptable job offers and reduces the time he spends searching. Thus, the unemployment rate will decrease in response to increased productivity (Mankiw, 2007).

III. Research Methods

This type of research used in this research is quantitative. Quantitative research departs from a theoretical study and the results of research by experts are then used as a reference and developed to identify problems posed for justification or rejection in the form of empirically obtained data documents. This research was conducted in the Eastern Region of Indonesia for the last 5 (five) years in which there were 12 provinces that were, West Nusa Tenggara Province, East Nusa Tenggara Province, North Sulawesi Province, Central Sulawesi Province, South Sulawesi Province, Southeast Sulawesi Province, Gorontalo Province, West Sulawesi Province, Maluku Province, North Maluku Province, West Papua Province, and Papua Province.

Secondary data in this study were collected through searching documentation and official publication of information through official websites published by the government in the form of education level data, in this case the average length of schooling in provinces in Eastern Indonesia, data on the minimum wage each province in Eastern Indonesia, data on labor productivity in each province in Eastern Indonesia, and data on the open unemployment rate for each province in Eastern Indonesia.

The data analysis technique used in this study is the Structural Model analysis to determine the direct and indirect effects of education and wages on the unemployment rate. To make it easier to analyze the data, this study uses analytical tools with the help of statistical software AMOS Version 21. The equation model from this research can be seen in the following equation:

$$Y1 = f (X1, X2, X3)$$

$$Y2 = f (Y1, X1, X2, X3)$$

Where:

X1 = Education

X2 = Minimum Wage

X3 = Inflation

Y1 = Labor Productivity

Y2 = Unemployment

IV. Result And Discussion

Description of research results statistical analysis of the direct effect between education, wages and inflation on labor productivity and the effect of education, wages, inflation, and labor productivity on unemployment in Eastern Indonesia.

Table 1 Estimation Results of Direct Effects in Eastern Indonesia

			Estimate	S.E.	C.R.	P
Productivity	<---	Education	0,163	0,048	3,397	***
Productivity	<---	Wage	0,744	0,209	3,556	***
Productivity	<---	Inflation	0,031	0,026	1,182	0,237
Unemployment	<---	Education	1,067	0,180	5,935	***
Unemployment	<---	Wage	0,292	0,791	0,369	0,712
Unemployment	<---	Inflation	0,311	0,091	3,403	***
Unemployment	<---	Productivity	0,461	0,446	1,033	0,302

Source: Processed secondary data

Information:

* Significant at $\alpha = 5\%$

a. Effect of Education on Unemployment in Regions

The regression results show that education is directly and indirectly significant to unemployment through labor productivity in Eastern Indonesia. The results of this study contradict those suggested by Cahuc and Zylbergberg who explained that the unemployment rate has a negative relationship with education, which means that if education increases, the unemployment rate will decrease. There are several reasons why unemployment in Eastern Indonesia has a positive effect on education, including that in the Eastern Indonesia Region the education of the people is higher on average so that they will choose to be unemployed voluntarily when compared to having to work but not in the field of work or compensation accordingly. with the expected. In addition, it can also occur because of the high level of family income so that it can support the living costs for families who are still unemployed. Thus they will only look for jobs that are really in accordance with the field or level of income they want, and do not want to look for jobs that are not in accordance with the desired field and wage level. So that education is in line with or in line with the unemployment rate. In addition, the higher the education level, the more job seekers will spend looking for work. This has led to an increase in the unemployment rate, especially in Eastern Indonesia.

b. The Effect of Wages on the Unemployment Rate in the Regions Eastern Indonesia

The regression results show that wages on unemployment, either directly or indirectly, have no significant effect. However, wages have a significant effect on the unemployment rate in Eastern Indonesia. Wages have no effect on unemployment, meaning that any changes that occur in the wage level do not change unemployment. In other words, the rise and fall of wages will not affect unemployment in Eastern Indonesia. Wages have a positive and significant effect on unemployment through labor productivity, meaning that the higher the wages are set, the higher the unemployment rate in Eastern Indonesia, the results of this study are in accordance with the theory said by Mankiw that when minimum wage regulations force wages to remain above the wage level equilibrium (the level that balances supply and demand), the regulation increases the quantity of workers supplied and decreases the quantity of workers demanded. So that there is a surplus of workers. Because more workers are willing to work than the number of jobs available, when the minimum wage rises, workers will flock to offer themselves to work for companies that increase their wages, while on the company side, it actually reduces the demand for labor, a number of workers are forced to become unemployed.

c. The Effect of Inflation on the Unemployment Rate in Eastern Indonesia

The regression results show that inflation directly has a positive and significant effect on unemployment. However, indirectly, inflation has no and insignificant effect on the unemployment rate through labor productivity in Eastern Indonesia. The results of the regression are in accordance with the hypotheses that have been previously presented. Inflation has a direct positive relationship to unemployment in Eastern Indonesia, high inflation often demands an increase in wages because they feel that the real wages they receive is low, the increase in wages makes some companies unable to pay labor wages, thereby reducing the workforce they have Use. In the regression results indirectly, inflation has a negative and insignificant effect on unemployment in Eastern Indonesia. This is because the inflation situation in Eastern Indonesia is different from the Phillips Curve Theory because the inflation that occurs in Eastern Indonesia is an increase in prices in general, so with rising prices, costs that continue to rise cause production activities to be very unprofitable so that capital owners usually prefer to use the money for speculative purposes or make unproductive investments, so the high rate of inflation that occurs will result in an increase in the interest rate (loan). In addition, inflation in Eastern Indonesia is also influenced by the increase in basic needs, increased oil and health costs, not as a result of labor productivity, so that the effect of the inflation rate on the unemployment rate in Eastern Indonesia is not significant.

d. Effect of Labor Productivity on Level Unemployment in Eastern Indonesia

The regression results show that labor productivity has a negative and insignificant effect directly on unemployment. The regression results are in accordance with the hypotheses that have been previously stated. This means that an increase or decrease in labor productivity does not have an impact on increasing or decreasing unemployment. The theory put forward by Dritsaki (2016) says that higher labor productivity makes the workforce more attractive to companies to increase employment and enable it by increasing the wages offered to workers. Hence, it is likely that the average worker will find acceptable job offers and reduce the time he spends looking for work. Thus, the unemployment rate will decrease in response to an increase in productivity. However, the resulting regression results say that high or low labor productivity has absolutely no effect on the unemployment rate.

Conclusion

Education directly and indirectly through labor productivity has a positive effect on unemployment. This occurs because of the limited formal employment opportunities available. One of the reasons is that the labor force that has higher education is only willing to work if they get a job that matches the level of education they are taking and prefers jobs in the formal sector so that they get relatively high satisfaction. The increase in minimum wages in Eastern Indonesia during 2015-2019 proves that wages tend to be rigid and cannot adjust downward. The minimum wage set by the government keeps wages rigid in the labor market. High wages make companies need a small workforce and lay off many workers, resulting in unemployment. One of the phenomena that exist in the current digitalization era is the acceleration of technological changes, especially those related to computerization and automation. Inflation directly has a positive effect on the unemployment rate. However, inflation indirectly has a negative effect on unemployment through labor productivity. Labor productivity has a direct negative effect on the unemployment rate. This shows that high or low labor productivity has no effect on the unemployment rate.

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