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# **Determinant of Employment in Indonesia: The Era of Trade Liberalization**

**Angga Restu Wardhana, Mohammad Saleh, Siswoyo Hari Santosa**

P.G. Student, Department of Economics and Development Studies, Faculty of Economics and Business, University of Jember, Indonesia

Professor, Department of Economics and Development Studies, Faculty of Economics and Business, University of Jember, Indonesia

Lecturer, Department of Economics and Development Studies, Faculty of Economics and Business, University of Jember, Indonesia

**ABSTRACT:** The purpose of this study is to determine the impact of economic growth, minimum investment and wages on employment in Indonesia in the era of globalization. The analytical tool used in this study is the panel data analysis. The results show that economic growth and foreign investment have a positive effect on employment. The variable wage has a negative effect on employment. On the other hand, the impact of trade liberalization seen using export intensity and the ratio of import penetration has an influence on employment. The policy carried out by the government is the preparation of a good quality workforce and encouraging MSME-based businesses.

**KEY WORDS:** Trade liberalization, Employment, Investment

## **I.INTRODUCTION**

Trade liberalization has both positive and negative impacts in terms of economic and other aspects, explained in a study related to trade liberalization that has a positive impact, especially on economic growth in world countries. This growth can be observed with an increase in *gross domestic product*. While the negative impact of trade liberalization is the decline in environmental quality in some countries, the next impact is the creation of export and import cooperation relationships (Kirkpatrick and Scriciu 2008).

The increase in trade activities is the impact of trade liberalization, the main objective of trade liberalization is to increase the level of welfare that is evenly distributed among member countries. Liberalization is also expected to increase the value of investment. Due to the accelerated market share and competitiveness of the country, it has led to the linking of foreign investors to invest in the country. That way new jobs will be created that can absorb the available workforce in the country.

Trade liberalization is now a trend in almost all countries in the world, one of which is expected to be a positive impact on national development, which is an effort to realize people's welfare. Development in the sector increases employment opportunities in order to improve the quality of resources human. But the phenomenon is that there are still many people who are not ready to compete in the national labor market, coupled with the current presence of foreign workers causing anxiety in some spheres of society, this concern is assumed by some people who assume that gradually foreigners will increasingly reduce employment opportunities in those who are constrained at the average line lack access to adequate education, or even equal to the well-to-do community in general. When viewed at this time the unemployment rate is classified as high, and consists of various groups, the government will bring in foreign workers with the amount of course will give a panic effect for this country. Therefore, with the openness of market trade to the world level is an opportunity to generate greater employment opportunities and be able to reduce the unemployment rate. With higher population growth, developing countries such as Indonesia face serious problems in providing new jobs for the available workforce. Size limited market makes a major obstacle for domestic producers to expand market share to the international scope, so that limited market size is an obstacle to creating new jobs. Therefore, the existence of trade liberalization is expected to be able to overcome the problem.



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# International Journal of Advanced Research in Science, Engineering and Technology

Vol. 7, Issue 5, May 2020

The positive impact of trade liberalization is proven by the research of Dutt, et al. (2009) which suggests that trade openness can increase labor productivity, so that the resulting output increases, and the response to labor absorption more. Further research in Kien & Leo (2009) suggesting that trade liberalization through export intensity can increase employment in Vietnam. Next, the negative impact described in the study of Jenskin & Sen (2006) found that trade liberalization has negative implications in Kenya and southern Africa. This requires a more in-depth study in a research study. Thus, the need for an assessment of the impact of trade liberalization on employment in Indonesia

## II. LITERATURE REVIEW

### A. TRADE LIBERALIZATION AND ITS MEASUREMENT TRADE

Liberalization or free trade is an economic concept that refers to the system of trade in goods and services between countries without government intervention in the form of tariffs and other trade barriers, such as quotas, subsidies, and taxes (Krugman et al., 2012). Lee (2005) argues that trade liberalization shifts the trade system to become more free which then causes an increase in the flow of goods and services between countries (free trade). According to Jayanthakumaran (2004), trade liberalization refers to export promotion policies and increased productivity by exploiting their comparative advantage. This ultimately makes a country able to face global competition and form economies of scale in the domestic industry. Shafaeddin (2005) provides an explanation that the purpose of trade liberalization is the rule in making decisions by the government in allocating resources to be minimal and encourage export promotion. Therefore, trade liberalization is broadly defined as the reduction of barriers to international trade towards a more open trade regime. Reduced trade barriers can be in the form of tariffs or non-tariff fees.

### B. EMPLOYMENT

Workers according to BPS (2010) are residents aged 15 years and over who are working, who have work but while not working, someone who does not have a job and is looking for work is categorized as working. Work is an activity of doing work with the aim of earning a living or helping to earn a living for at least one hour continuously during the past week. Labor absorption is the number of workers absorbed or working in a particular business unit. Labor absorption can be related to the balance of interaction between labor demand and labor supply, whereby labor market demand and labor market supply together determine a level of equilibrium wages and a use of balance labor (Kadafi, 2013). One problem that commonly arises in the labor force is the imbalance between demand for labor (*demand for labor*) and supply of labor (*supply for labor*). The imbalance can be in the form of:

- (a) Greater supply than demand for labor (*excess supply of labor*) and
- (b) Greater demand than labor supply (*excess demand for labor*) (Mulyadi, 2006).

Employment is a very basic aspect of human life because it covers economic and social dimensions. One of the main goals of Indonesia's development is the creation of new jobs in sufficient quantity and quality to absorb the additional workforce entering the labor market every year.

## III. METHODOLOGY

### A. DATA

Data used in this study is panel data with cross sections in all provinces in Indonesia and 2015-2019 time series. So that the number of observations in this study was 170 observations. Data source used from Central Bureau of Statistics Indonesia.

### B. MODEL

Model Panel data equation model, which is a combination of cross section data. Data time series is as follows:

$$TK_{it} = a_1 + a_2 ix_{it} + a_3 imp_{it} + a_4 PDRB_{it} + a_5 ump_{it} + a_6 pma_{it} + e_{it} \quad (1)$$

Equation (1) explains that labor absorption (TK) is influenced by export intensity (ixs), import penetration ratio (imp), gross regional domestic product (pdrb), provincial minimum wage (ump) and foreign investment (pma). The method used in this research is *Panel Least Square* (PLS). *Panel Least Square* (PLS) is a tool static panel analysis. In the

analysis tool *Panel Least Square* (PLS), three models need to be done to determine the model. The three models are *Panel Least Square* (PLS), *Least Square* (PLS), *Fixed Effect Model* (FEM) and *Random Effect Model* (REM). The three models will be chosen as the best models to estimate. The Model *Least Square Panel* (PLS) has the concept that assumes the behaviour between individuals is the same in a period (Maryaningsih, et al. 2014; Muye & Hassan, 2016; Deniz, et al. 2018).

**IV. RESULTS AND DISCUSSION**

The results of the analysis using the tool *Panel Least Square* (PLS) to find out the impact of liberalization trade on employment in Indonesia. Before estimating results, the first step that needs to be done is to have a model. Model selection through statistical tests. There are three steps in the model selection exam. First, the chow test is used to select the *Panel Least Square* (PLS) or *Fixed Effect Model* (FEM). Second, the thirsty test to have a *Fixed Effect Model* (FEM) or *Random Effect Model* (REM). Third, test *Lagrange multiplier* to have a *Random Effect Model* (REM) or *Panel Least Square* (PLS).

Based on Table 1 shows the results of the chow test probability of 0,000 less than the alpha value ( $\alpha = 5\%$ ). These results indicate that the *Fixed Effect Model* (FEM) is better than *the Least Square Panel* (PLS). The thirst test results with a probability value of 0,000 smaller than the alpha value ( $\alpha = 5\%$ ). Hausman test results show that the *Fixed Effect Model* (FEM) is better than the *Random Effect Model* (REM). Furthermore, testing the model with the test *multiplier Lagrange* with a probability value of 0,000 is smaller than the alpha value ( $\alpha = 5\%$ ).test results *Lagrange multiplier* show *Random Effect Model* (REM) is better than *Least Square Panel* (PLS). Thus, the best model for estimation in this study is the *Fixed Effect Model* (FEM).

**Table 1. Analysis Results on Panel Least Square**

| Variable             | Model <i>Panel Least Square</i><br>(PLS) | Model <i>Fixed Effect Model</i><br>(FEM) | Model <i>Random Effect Model</i><br>(REM) |
|----------------------|--|--|---|
| IXS                  | 0,028*<br>[5,339]<br>(0,000)             | 0,563**<br>[3,348]<br>(0,038)            | 0,002<br>[1,168]<br>(0,244)               |
| IMP                  | 0,0611*<br>[6,274]<br>(0,000)            | -0,3511**<br>[-2,646]<br>(0,026)         | -0,000<br>[-0,071]<br>(0,944)             |
| PDRB                 | -0,363*<br>[-2,978]<br>(0,003)           | 0,711**<br>[2,865]<br>(0,026)            | 0,085<br>[1,392]<br>(0,166)               |
| UMP                  | 0,006<br>[0,024]<br>(0,981)              | 0,247*<br>[5,071]<br>(0,000)             | 0,229*<br>[4,888]<br>(0,000)              |
| PMA                  | 0,100*<br>[2,991]<br>(0,003)             | 0,146***<br>[2,986]<br>(0,077)           | -0,000<br>[-0,193]<br>(0,847)             |
| R-Squared            | 0,654                                    | 0,967                                    | 0,535                                     |
| Adj. R-Squared       | 0,643                                    | 0,957                                    | 0,520                                     |
| <b>Testing Model</b> |  |  |   |
| Chow test            | 0,000                                    |  |   |
| Hausman test         | 0,000                                    |  |   |
| LM test              | 0,000                                    |  |   |

\*  $\alpha = 1\%$ , \*\*  $\alpha = 5\%$ , \*\*\*  $\alpha = 10\%$

[...] = t-statistics

(...) = probability



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## International Journal of Advanced Research in Science, Engineering and Technology

Vol. 7, Issue 5, May 2020

Based on the estimation results of the model testing that shows the best model is the *Fixed Effect Model* (FEM). The Export Intensity Variable (IXS) has a probability value of 0.038 which is smaller than the alpha value of significance ( $\alpha = 5\%$ ). On the other hand, the coefficient value of 0.563 with a positive sign indicates the relationship of Export Intensity (IXS) with employment is positive. This condition shows that the increase in exports will provide high productivity in the industry and increased demand in the international market. High demand in the international market will encourage an increase for output that in turn the industry will add labor to increase its production. The Value of intensity-increased exports indicates the increasing activity of exports, which has led to wider marketing and opening up of trade that has an impact on increasing employment.

There is a positive relationship between the intensity of exports (IXS) with employment in accordance with research conducted by Adji, et al.,(2012); Kumar, (2012). Research conducted by Erten, et al. (2019) explains that the intensity of exports will have an impact on employment. Research conducted by Goaid & Sassi, (2015); Kien & Heo, (2009) affirm that export intensity has a significant positive relationship with employment.

The import penetration ratio (IMP) variable has a significant negative effect on employment. This can be seen from the coefficient value of 0.351 with a negative sign indicating the high penetration of imports will reduce labor absorption. On the other hand, the probability value of 0.026 is smaller than the significant alpha value ( $\alpha = 5\%$ ). This condition shows that when imports increase, it will put pressure on domestic product demand, thereby reducing the productivity of local industries. Thus, the value of the import penetration ratio (IMP) shows the ability of the domestic market to compete with imported products. Thus, the high value of the import penetration ratio (IMP) will reduce labor absorption.

The significant relationship has a negative effect between the ratio of import penetration (IMP) and employment absorption in accordance with research conducted by Hellberg & Mannerson, (2019); Köllner & Nr, (2016). Research conducted by Adji, et al.,(2012) explains that the ratio of import penetration has an influence on employment in Indonesia. The results of the analysis conducted by Herath, (2014) and Lohani, (2017) provide an explanation that the ratio of import penetration has a significant negative relationship with employment.

Economic growth (GRDP) has a significant positive effect. The coefficient value of 0.711 with a positive direction indicates that high economic growth will have an influence on the high absorption of labor. On the other hand, the probability value of 0.026 is smaller than the alpha value of significance ( $\alpha = 5\%$ ). Thus, high economic growth reflects an increase in output from an increase in people's purchasing power, so that the aggregate demand for goods and services increases. This increase in output encourages the industry to increase its workforce to increase its production. The relationship between economic growth and labor according to Okun's Theory, where real economic growth will reduce unemployment (Mankiw, 2000).

There is a relationship between economic growth and employment in accordance with research conducted by Nurrohman & Arifin (2010) and Adi (2018). Research conducted by Adji, et al. (2012) explains that economic growth has an impact on labor absorption caused by high economic activity. Thus, economic growth with employment in this study is in accordance with prevailing hypotheses and theories as well as previous research.

The probability value of 0,000 is smaller than the alpha value of significance ( $\alpha = 1\%$ ) on the Provincial Minimum Wage variable (UMP) indicating there is a significant positive relationship. On the other hand, a coefficient value of 0.247 with a positive sign on the variable UMP indicates that the high Provincial Minimum Wage (UMP) will provide an increase in employment. However, the results of this study are inversely proportional to the prevailing hypotheses and theories. In theory, wages are used as a burden for companies, because of the costs that must be incurred by companies in paying labor. Thus, the higher the wage, the smaller the company profits obtained. The response of the company to continue to maximize profits through the reduction of labor.

However, in this study there is a positive relationship between wages and labor. Research in line with this research is Akmal (2010). Akmal (2010) explains that the positive relationship between Provincial Minimum Wages (UMP) and employment is due to an educated workforce. On the other hand, Todaro (2006) provides an explanation that the company will add labor as long as the company's revenue exceeds wages. Meanwhile, research conducted by Pangastuti (2015); Azaini (2014) and Dimas & Woyanti (2009) explain that high wages will increase labor welfare



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# International Journal of Advanced Research in Science, Engineering and Technology

Vol. 7, Issue 5, May 2020

which causes consumption to increase, when consumption increases, it will influence the high output of companies which makes companies increase labor to increase production in high demand.

Foreign Direct Investment (PMA) has a probability value of 0.077 less than the significance alpha value ( $\alpha = 10\%$ ). On the other hand, the coefficient value of 0.146 with a positive sign. This condition shows that the relationship of Foreign Investment (PMA) with employment is significantly positive effect. High Foreign Investment (PMA) will encourage business expansion and increase production, which makes companies need workers in order to increase production. There is a relationship between Foreign Investment (PMA) with employment in accordance with research conducted by Agustini, (2017); Ramadhania et al., (2018). Research conducted by Du & Ishizuka, (2014) and Hyeock, et al., (2020) explains that there is a correlation between foreign investment and employment. Foreign investment will provide new business opportunities that encourage employment (Liu, et al. 2013).

The main strategy that the government needs to undertake in order to increase absorption labor with trade liberalization is to prepare workers of good quality and to open new jobs oriented to MSMEs. Both strategies are carried out to increase employment due to Indonesia being able to compete in the international market. When Indonesia is able to compete in the international market, Indonesian companies need products with good quality and quantity. Products with good quality and quantity must have a foundation with a quality workforce. On the other hand, Indonesia also needs to increase MSMEs because on the basis of MSMEs they can absorb a high workforce.

## V. CONCLUSION

Based on the results of the analysis in this study using the *Fixed Effect Model* (FEM) shows that the dependent variable has the influence of the independent variable. Proposed trade liberalization with export intensity and the ratio of import penetration as well as economic growth and foreign investment have a positive effect on employment. The variable minimum wage has a negative effect on employment. The policy that needs to be done is the government in the face of trade liberalization in an effort to absorb labor through the preparation of good quality workforce and encourage MSME-based businesses.

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