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The Effect Of Exports And Imports On Employment Opportunities In Indonesia

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ABSTRACT

This research wants to know the partial influence of exports and imports on employment opportunities in Indonesia in the long term and short term. The research method used is the Multiple Regression Error Correction Model (ECM) method. The research results show that in the long term, the import variable is partially declared to reject H0 as evidenced by a probability t-statistic value of <0.05, the export variable is declared to accept H0 as evidenced by a probability t-statistic value of >0.05%. In the short term, the results of the Error Correction Model (ECM) are valid for short term estimation as evidenced by the probability value ECT (-1) <0.05, partially the imported variable is declared to reject H0 as evidenced by the probability t-statistic value <0.05, The eskpro variable is declared to accept H0 as proven by a t-statistic probability value of >0.05%. Policies need to be directed at achieving downstream domestic production and producing finished goods to support the expansion of export markets by increasing the number of export destination countries. And imports need to be directed to support exports and not for consumption.

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INTRODUCTION

The Demographic Bonus that Indonesia will achieve in 2030 to 2040 is a golden period for Indonesia to become a developed country by accelerating development through human resources of productive age. Apart from providing a golden period, the Demographic Bonus can be a nightmare for Indonesia. In the period to achieve the demographic bonus, there is very rapid population growth, Indonesia must strive to achieve full employment by providing large employment opportunities to provide employment opportunities for every productive population to be part of the acceleration of development and not as an obstacle to high development. unemployment.

The creation of large job opportunities does not only occur by relying on the domestic economy, it is necessary to take advantage of the open economy or international markets. One of the international market activities is transactions of goods and services between countries. These transactions can be a driver of creating job opportunities. Goods transactions between these countries include export and import activities.

The ongoing export activities have provided opportunities for market expansion, a country does not need to worry about excess production of goods and services. Producers can increase their production for trade not only to meet domestic needs but also to meet the needs of consumers from abroad. In contrast to export activities, import activities aim to provide goods and services from abroad that are less efficient if produced domestically as well as raw materials and auxiliary materials that a country does not have for use in the domestic production process. These two activities support each other so that production specialization is created which will provide large benefits for meeting the needs and welfare of a country. The creation of production specialization in a country will encourage increased production and have an impact on expanding employment opportunities.

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Previous research has looked at the variables of exports, imports and employment opportunities but has not looked at the influence of export and import variables directly on employment opportunities. Previous research has looked at the variables of exports and imports on economic growth and indirectly affects employment opportunities. Economic growth is indeed an indicator of economic development followed by the expansion of employment opportunities so that national output continues to increase, but it has not been proven which export or import variables have the greatest influence on expanding employment opportunities. Research on direct import variables on employment opportunities is still low in interest, compared to research that looks at export variables on employment opportunities.

Previous research focused on the influence of exports and imports on economic growth, such as research conducted by (Astuti & Ayuningtyas, 2018), and also research that observed the relationship between consumption, exports, imports and economic growth (Khan et al., 2022) showed positive results. It is very interesting that imports play an important role because of the relationship between imports and economic growth and not only as a deduction from the calculation of national income, imports are also related to consumption and support exports. Research on the impact of exports and imports on agricultural sector production productivity in corn commodities, focuses researchers on domestic commodity prices and the ability to produce these commodities (Utomo, 2021). Changes in production due to changes in production productivity will certainly contribute to the use of human production factors from Utomo's research This provides an opportunity to increase the level of employment opportunities as a result of changes in exports and imports which also provide changes in the level of employment opportunities. The influence of investment and exports on economic growth and labor absorption in East Kalimantan Province (Taufik et al., 2014) has found that export results do not have a significant effect on labor absorption. However, this result is different from research on the impact of decreasing exports on labor absorption (Wibowo, 2013) with sectoral labor multiplier analysis showing that decreasing exports results in reduced employment opportunities.

This research is different from previous studies which tend to look at the influence of exports, in this study the import variable is not a subtraction of the export variable in the economy, but the two variables are separately examined to compare their effect on domestic employment opportunities, the test is carried out for a short period of time. as well as predicting its impact over the long term, in order to provide policy recommendations in preparing employment opportunities for high population growth facing Indonesia's golden period.

Based on the description above, the formulation of the problem in this research is (1) what is the influence of exports on employment opportunities in Indonesia in the long term and short term, (2) and what is the influence of imports on employment opportunities in Indonesia in the long term and short term.

METHODS

The research is included in quantitative research. The type of data used in this research is time series data over a period of 17 years (2010-2022). Based on the source, the data used is secondary data obtained from the Central Statistics Agency (BPS). Exports are the value of trade in goods carried out by a country with the aim of selling domestically produced goods to other countries.

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Imports are the value of trade in goods carried out by a country with the aim of obtaining goods from other countries to meet domestic needs. Employment Opportunity Level is the percentage of labor that can be absorbed by employment in a country. The analysis in this research uses multiple regression and with the main requirement that the data is not stationary at the level, but is stationary at the degree of Error Correction Model (ECM) integration and the variables are cointegrated. The model is used to correct short-term to long-term imbalances. The models are divided into:

Ordinary Least Square (OLS) multiple regression model:

$$TKK_t = a0 + a1LOG\_EKS_t + a2LOG\_IMP_t + e_t$$

Error Correction Model (ECM):

$$\Delta TKK_t = a0 + a1\Delta LOG\_EKS_t + a2\Delta LOG\_IMP_t + ECT_{t-1} + e_t$$

Where:

TKKt	= LevelEmployment Opportunity;
LOG_EXTSt	=Real exports;
LOG_IMPt	=Real imports;
a0	=constant;
a0, a1, a2	=coefficient;
et	= error term;
ECTt-1	= Error Correction Term

The analysis will be calculated using E-Views 12 software. The sequence of analyzes carried out is: (1) stationarity test (unit root test) using the Augmented Dicky Fuller (ADF) method; (2) cointegration test using the Engle-Granger (EG) method; (3) error correction model (ECM) test.

RESULTS AND DISCUSSION

Data Stationarity Test and Cointegration Test

Analysis of the ECM model estimation in the long term and short term begins with testing the unit root and cointegration test.

Table 1. Unit Root Test Using Augmented Dicky Fuller at Level and First Different.

Variable	Prob. Levels	Information	Prob. 1 Different	Information	Prob. 2 Different	Information
TKK	0.1814	Not Stationary	0.0172	Stationary	0.0015	Stationary
LOG_EX	0.8547	Not Stationary	0.0718	Not Stationary	0.0189	Stationary
LOG_IMP	0.1152	Not Stationary	0.0074	Stationary	0.0044	Stationary

Table 2. Johansen Cointegration System Test

Trace Statistics	0.05Critical Value	Prob.**	Max-Eigen Statistics	0.05Critical Value	Prob.**
46.79511	29.79707	0.0002	28.86360	21.13162	0.0034

Table 1 shows the results of the unit root test at level level with a probability value for each variable > 0.05 so that it is categorized as non-stationary. This can give a spurious regression to the estimation

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results so it is necessary to test at a higher degree or order of difference. At the first difference level, only the risk variable is non-stationary and shows a probability value of >0.05. In the improved second difference test, all variables were stationary, showing a probability value of <0.05, thus the requirement for data stationarity was met. Next, a cointegration test was carried out as shown in table 2.

Table 2 shows the results of the Johansen cointegration test showing that the trace statistic and max-eigen statistic values are each greater than the critical value with a probability of <0.05, so that the ECM modeling is able to express short-term and long-term relationships.

Table 3. Classic Assumption Test Results

Classic assumption test	Test Type	Prob.
Normality	Jarque-Bera	0.9838
Autocorrelation	Breusch-Godfrey	0.2711
Heteroscedasticity	Breusch-Godfrey	0.9279
Linearity	Ramsey Resert Test	0.8636
Multicollinearity	VIF	5.232699

Table 3 shows that this research passed the classical assumption test with the probability of normality, autocorrelation, heteroscedasticity and linearity tests being greater than 0.05 and multicollinearity having a VIF value < 10.

Hypothesis test

Long Term Effects

Table 4. Long Term Model Estimation Results

Variables	Coefficient	t-Statistics	Prob.
C	34.89888	1.794766	0.1029
LOG_EX	-3.755836	-1.386995	0.1956
LOG_IMP	7.851500	2.555875	0.0286

Based on table 4 the regression equation can be written as follows:

$$TKK = 34.89888 - 3.755836\Delta LOG\_EKS_t + 7.851500\Delta LOG\_IMP_t + e_t$$

The results of the Ordinary Least Square (OLS) multiple regression estimation show that in the long term the independent variables used in this research, namely exports and imports, have a moderate category in predicting or explaining the dependent variable, namely the level of employment opportunities with an Adjusted R-squared value of 0.42 or 42% , while the remaining 57% can be explained by other variables. Partially, the import variable is declared to reject H0 as evidenced by the probability t-statistic value <0.05, thus an increase in imports of 1% will increase the level of employment opportunities by 7.851 or vice versa. Meanwhile, the export variable is stated to accept H0 as proven by the t-statistic probability value >0.05% so that a 1% reduction in exports will not increase the employment opportunity level variable by 3.755 or vice versa.

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Short Term Effects

Table 5. Short Term Model Estimation Results

Variables	Coefficient	t-Statistics	Prob.
C	0.142301	0.690539	0.5121
D(LOG_EX,2)	-7.490311	-1.462853	0.1869
D(LOG_IMP,2)	9.877370	3.116770	0.0169
ECT(-1)	-1.174292	-2.717885	0.0299

Based on table 5 the ECM equation can be written as follows:

$$D(TKK,2) = 0.142301 - 7.490311\Delta LOG\_EKS_t + 9.877370\Delta LOG\_IMP_t - 1.174292 + e_t$$

The results of the Error Correction Model (ECM) model are valid for short-term estimation as evidenced by the probability value ECT(-1) <0.05, indicating that the export and import variables are included in the strong category in explaining employment opportunity level variables as evidenced by the Adjusted R-value. squared 0.70 or 70%, while the remaining 30% can be explained by other variables. Partially, the import variable is declared to reject H0 as evidenced by the probability t-statistic value <0.05, thus an increase in imports of 1% will increase the level of employment opportunities by 9.877 or vice versa. Meanwhile, the export variable is declared to accept H0 as proven by the t-statistic probability value >0.05% so that a 1% reduction in exports will not increase the employment opportunity level variable by 7.490 or vice versa.

Discussion

Exports on Job Opportunities

Exports have no effect on employment opportunities in the short term, this is because the decline in exports in the short term is caused by changes in world markets, decreased demand and prices for Indonesian exports for various commodities, especially the oil and gas sector. However, the decline in exports did not have an impact on employment opportunities, this was due to diplomatic relations and trade protection factors applied to several commodities, apart from that, the decline in exports in the oil and gas sector did not have an impact on employment opportunities due to the small number of workers in the oil and gas sector.

This research is different but can be supported by research that uses labor multiplier analysis from the input-output table showing that the decline in exports has an impact on the decline in employment opportunities due to the decline in non-oil and gas exports which has an impact on the agricultural sector and the industrial sector, as for the respective declines in both sectors. reaching 210.4 thousand people and 190.7 thousand people. The agricultural sector has a small multiplier but has the highest labor absorption, while the industrial sector has a large multiplier relative to other sectors (Wibowo, 2013).

The condition of decline and the lack of influence of exports on employment opportunities continues in the long term. Indonesian exports tend to decline, the cause is from the destination country and production aspects. Indonesia focuses too much on export destination countries only on certain destination countries, namely Singapore, Malaysia, Japan, South Korea, China, and the United States. From the product aspect, Indonesia exports a lot of raw materials due to limitations in downstream production to provide added value. However, this decline in exports did not affect

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domestic employment opportunities due to the decline occurring only in a few export destination countries, besides that the increase in employment opportunities was also caused by the domestic market.

The results of this research are also supported by research conducted in Bali Province using Vector Auto Regression testing, showing that exports are less dominant in influencing employment opportunities, as evidenced by the small variance decomposition value starting from the 0th to the 20th observation period, namely 0.180 and increasing to 1.419 compared to with economic growth showing a dominant influence starting from 15,401 increasing to 19,127 (Priyono & Wirathi, 2016). Research that uses path analysis to look at direct and indirect effects also shows the same results as this research, namely the insignificance of exports on labor absorption both directly and indirectly through economic growth (Dewi & Sutrisna, 2015).

Imports on Job Opportunities

The results of this research show that foreign goods markets have a significant influence on increasing employment opportunities in Indonesia. However, what is interesting from the results of this research is that the export variable, which is often considered to contribute to increasing state income and employment, shows a negative and insignificant value. On the other hand, imports consume state income and increase state debt, becoming an obstacle to domestic production. Imports actually have a significant positive impact on the level of employment opportunities.

The effect of imports on employment opportunities in the short term shows that the increase in imports is caused by the supply of goods to meet consumption needs that cannot be produced or fulfilled by the domestic market. With this aim, the need for imported goods must be responded to by the government and business actors by utilizing foreign markets through import activities. The response to the supply of imported goods attracts workers and creates jobs.

This phenomenon shows that in the long term, the increase in imports and their impact on employment opportunities is caused by breaking the production chain or downstreaming domestic production to convert raw materials into semi-finished goods in order to simplify the production process into finished goods to meet domestic goods needs. This condition causes imports of semi-finished materials to increase to be used in the production process as raw materials and auxiliary materials in the industrial sector which absorbs a lot of labor. Nine industrial sectors, namely machinery and metals, automotive, electronics, basic chemicals, food and beverages, animal feed, textiles and textile products (TPT), other chemical goods, and pulp and paper.

This research is supported by previous research, which found that a large increase in import value occurred in imports of raw materials, followed by imports of capital and consumer goods. By referring to this, it can be stated that the content of imported raw materials in domestic consumer goods remains (Kamaluddin, 2015). Research in the following year also stated the same thing, namely that Indonesian products were generally made from imported raw materials (Alhayat & Muslim Azis, 2016).

This research proves Keynes' theory that employment opportunities in a certain period are determined by aggregate expenditure (Sukirno, 2007). However, it has fundamental differences with Keynes's theory. This research does not use the net export component where imports are a deduction from aggregate expenditure, but instead places exports and imports as separate components. This condition provides a clearer picture regarding foreign aggregate expenditure which influences domestic employment opportunities.

CONCLUSION

The import variable influences employment opportunities in the long and short term as evidenced by the probability t-statistic value <0.05 and has a positive value. In the long term, an increase in imports of 1% will increase the level of employment opportunities by 7,851 or vice versa. In the short term, an increase in imports of 1% will increase the level of employment by 9,877 or vice versa.

The eskpro variable does not affect employment opportunities in the long and short term as evidenced by the t-statistic probability value >0.05% and has a negative value. In the long term, a 1% reduction in exports will not increase the employment rate variable by 3.755 or vice versa. In the short term, a 1% reduction in exports will not increase the employment rate variable by 7.490 or vice versa.

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