EFFECT ANALYSIS OF INFLATION, EXPORTS AND IMPORTS ON ECONOMIC GROWTH IN INDONESIA

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Abstract
A country's economic development is significantly influenced by economic growth. A nation can use economic growth indicators to inform its economic policy decisions and help it achieve its economic objectives. This study aims to examine the effect of inflation, exports and imports, on Indonesia's economic growth between 1990 and 2020. There are a number of issues in this study, and the error correction model, or ECM, is the model used in the data used to determine how to resolve these issues (Error Correction Model). The ECM (Error Correction Model) method calculations' findings are used to explain why there is a long-term negative relationship between inflation and economic growth. Additionally, exports have a short-term negative impact on Indonesia's economic growth. In order for economic activities to run smoothly and economic growth to increase, it is hoped that export-import activities in Indonesia can stabilize economic growth and inflation from year to year.

Keywords: ECM Method, Economic Growth, Export, Import, Inflation

1. INTRODUCTION
Economic growth is a long-term goal that must be considered by a country and later is intended to make high economic growth occur, a country will progress and prosper. On average, each country has a goal that is almost the same as each other, namely the goal of being able to accelerate economic growth in the country. A reaction to an increase in output per capita in the long run and occurs continuously is referred to as economic growth. Economic growth is a benchmark to describe whether or not an economy is healthy in a country or whether or not a country's economy is running and can also be used as a condition to make people in that country more advanced and prosperous. If a country's economic growth does not grow, it will cause another new problem. Economic and social problems, such as poverty, social inequality, health and others. In looking at economic growth, the indicator that can be used is GDP Growth, GDP Growth is an indicator in the form of the level of economic development of a country and how the country's economy is growing or is experiencing shrinkage. Economic growth is used as an indicator in evaluating and assessing the condition of economic development in the country which will later be needed as a consideration in making economic policies in the following years.
Table 1. Indonesia's GDP Growth in 2012-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>6.22</td>
</tr>
<tr>
<td>2011</td>
<td>6.17</td>
</tr>
<tr>
<td>2012</td>
<td>6.03</td>
</tr>
<tr>
<td>2013</td>
<td>5.56</td>
</tr>
<tr>
<td>2014</td>
<td>5.01</td>
</tr>
<tr>
<td>2015</td>
<td>4.88</td>
</tr>
<tr>
<td>2016</td>
<td>5.03</td>
</tr>
<tr>
<td>2017</td>
<td>2.12</td>
</tr>
<tr>
<td>2018</td>
<td>5.17</td>
</tr>
<tr>
<td>2019</td>
<td>5.02</td>
</tr>
<tr>
<td>2020</td>
<td>-2.07</td>
</tr>
</tbody>
</table>

Source: World Bank

GDP growth according to world bank data shows that economic growth data in recent years has been relatively declining and in 2020 the data reached -2.07. The decline in economic growth data to reach a minus number that occurred in 2020 due to the Covid-19 pandemic outbreak. The Covid-19 outbreak made all economic activities stop and eventually caused economic problems that had an impact on economic growth, especially in the Indonesian region.

Problems in international trade in Indonesia are one of the influences on GDP growth in the country, international trade problems that often occur are export activities are lower than the value of imports, export activities in Indonesia are still very lacking, even though the number of exports will affect economic growth (Ningsih et al., 2021). Some of the obstacles to export activities in Indonesia are caused by the following problems, First there is a regulated agent, the problem is not with the agent, but with the examination fee which is set very high, which is around Rp. 1200 per kilogram or
subscriptions per year of Rp. 25 million. The second problem comes from its human resources, the problem has not been resolved until now is everything that includes human resources, ranging from wages, skills, up to the rules. The third is thuggery and illegal levies, this one problem is still very difficult to eradicate. There are so many entrepreneurs who are engaged in exporting that they have to spend extra money to pay illegal levies and rations of thugs that should not be on the list of expenses.

Import activities are high compared to exports due to the attitude of dependence from the community, excessive consumption activities and lifestyles that require import activities to fulfill them.

Table 2. Indonesian Export Data for 2010-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Export (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>24.30</td>
</tr>
<tr>
<td>2011</td>
<td>26.33</td>
</tr>
<tr>
<td>2012</td>
<td>24.59</td>
</tr>
<tr>
<td>2013</td>
<td>23.92</td>
</tr>
<tr>
<td>2014</td>
<td>23.67</td>
</tr>
<tr>
<td>2015</td>
<td>21.16</td>
</tr>
<tr>
<td>2016</td>
<td>19.09</td>
</tr>
<tr>
<td>2017</td>
<td>20.18</td>
</tr>
<tr>
<td>2018</td>
<td>21.00</td>
</tr>
<tr>
<td>2019</td>
<td>18.45</td>
</tr>
<tr>
<td>2020</td>
<td>17.17</td>
</tr>
</tbody>
</table>

Source: World Bank

Figure 2. Indonesian exports in 2010-2020

Source: World bank, processed
Export data in 2010-2020 relatively decreased, with the highest exports in 2011 and the lowest exports in 2020. Exports decreased in 2020 due to the pandemic, so international trade activities were limited. These limits are imposed because there are several countries that enforce a lockdown system and close all activities from outside their country, this causes Indonesia's export level to decline.

<table>
<thead>
<tr>
<th>Year</th>
<th>Import (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>22.40</td>
</tr>
<tr>
<td>2011</td>
<td>23.85</td>
</tr>
<tr>
<td>2012</td>
<td>24.99</td>
</tr>
<tr>
<td>2013</td>
<td>37.04</td>
</tr>
<tr>
<td>2014</td>
<td>24.41</td>
</tr>
<tr>
<td>2015</td>
<td>20.78</td>
</tr>
<tr>
<td>2016</td>
<td>18.33</td>
</tr>
<tr>
<td>2017</td>
<td>19.18</td>
</tr>
<tr>
<td>2018</td>
<td>22.07</td>
</tr>
<tr>
<td>2019</td>
<td>19.00</td>
</tr>
<tr>
<td>2020</td>
<td>16.02</td>
</tr>
</tbody>
</table>

Source: World Bank

The highest import data occurred in 2013 at 37.04% and in recent years, imports have seen a decline as well as Indonesian export data, the following are Indonesian imported commodities consisting of:

1) Oil and gas in the form of crude oil, oil and gas.
2) Machinery & mechanical equipment in the form of automotive and precision tools.
3) Electrical Equipment, electrical equipment became the largest imported goods after imports of non-oil and gas.
4) Plastics and plastic goods, plastics are imported goods because plastic is used as packaging in the food and beverage industry, besides that plastic raw materials are also needed by the automotive industry.

5) Cereals, cereals or seeds are classified as a type of plant that is grown and harvested for the seeds or the contents of the fruit as a source of carbohydrates. Cereal imports include wheat, corn, sorghum and others. Wheat imports are used in the manufacture of instant noodles and bread, while corn is used for animal feed and for daily consumption.

6) Pharmaceutical Products, Imports in 2020 are more for the import of pharmaceutical products, due to the covid-19 pandemic, Indonesia is still dependent on pharmaceutical products from other countries, so from pharmaceutical products to become one of Indonesia's imported commodities.

7) Food, food commodities imported by Indonesia in the form of garlic, shallots, sugar, red meat, salt, milk and others.

Import activities do not completely have a negative impact on the Indonesian economy. In particular, for imported goods in the form of basic materials, these goods are needed to support domestic industries, import activities occur because raw materials are not available domestically and make companies carry out import activities to be able to carry out their production activities. With the movement of domestic industry, it can be concluded that the Indonesian economy is also moving.

Factors that sufficiently affect economic growth are inflation, inflation is a sure thing for a country, the influence of excessive inflation will have a negative impact on the economy of a country. Therefore, inflation is an important indicator that needs to be considered and taken into account in the economy of a country. The worst inflation problem ever made a dark history in Indonesia in 1998, inflation greatly affected people's purchasing power, due to massive inflation that year people's purchasing power fell and the rate of economic growth fell.

<table>
<thead>
<tr>
<th>Year</th>
<th>Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>6.96</td>
</tr>
<tr>
<td>2011</td>
<td>3.79</td>
</tr>
<tr>
<td>2012</td>
<td>4.30</td>
</tr>
<tr>
<td>2013</td>
<td>8.38</td>
</tr>
<tr>
<td>2014</td>
<td>8.36</td>
</tr>
<tr>
<td>2015</td>
<td>3.35</td>
</tr>
<tr>
<td>2016</td>
<td>3.02</td>
</tr>
<tr>
<td>2017</td>
<td>3.61</td>
</tr>
<tr>
<td>2018</td>
<td>3.13</td>
</tr>
<tr>
<td>2019</td>
<td>2.72</td>
</tr>
<tr>
<td>2020</td>
<td>1.68</td>
</tr>
</tbody>
</table>

Source: World Bank
Indonesia's inflation for the years 2010-2020 has fluctuating data but relatively decreased in recent years. The highest inflation was in 2013 at 8.38 and the lowest inflation was in 2020 at 1.68. A good inflation rate is an inflation rate that can be controlled and tends to be stable. Low inflation is not good for the economy but high inflation is also not good for the sustainability of a country's economy.

Based on these economic problems, the researcher wants to know the effect of the three dependent variables, namely exports, imports and inflation on the independent variable, namely economic growth that occurs in Indonesia.

2. LITERATURE REVIEW
2.1. Economic growth
Economic growth is the increase in both the output produced and the production of the production inputs. If the total output produced rises over time, it is assumed that the nation's economy is growing. Economic growth is used as a focal point and objective for developing nations each year. The indicators of a country's economic growth rate show how successfully it has carried out its economic activities. One of Indonesia's priorities in realizing a prosperous nation is economic growth. There are several measuring tools available in this case to determine how economic growth takes place. Some of them are:

1) Gross domestic product
Gross Domestic Product (GDP) is the total amount of output produced at market prices. There is a shortage in the use of GDP, the shortage of GDP is used as a reference for economic growth because it is too universal and not sufficient to describe welfare.

2) GDP per Capita or Income Per capita
GDP per capita is a more suitable benchmark to use because the calculation also considers the total population. So that the amount of income per capita can be found through the division of GDP by the total population.

3) Hourly Earnings
A country is categorized as superior to other countries if its income level is higher than the level of income in other countries based on similarities in the type of work.

2.2. Export

Export is an activity by selling commodities owned by the state to foreign countries with the rules set by the government and resulting in the occurrence of payments in the form of foreign exchange, as well as the occurrence of relations with other countries through these buying and selling activities. The output generated from export activities is money from foreign exchange or foreign exchange, which is then used as a source of income for the country and also the creation of cooperation between countries and other countries. Export is a trade process to foreign countries that can provide an impetus to increase demand for domestic trade which has a positive impact on the emergence of the factory industry, with stable political support and efficient social institutions (Todaro, 2006).

According to a theory put forth by Hecksher-Ohlin, exports have a sizable impact on a country's economic development if its products are made using less expensive, abundant, and sustainable production inputs. Through these export activities, it will provide benefits for the country, because it can minimize inputs and maximize output can make national income in the country increase and the development process and economic growth can occur in a fast time.

The main function of export activities to international trade is to increase a country's profit and GDP, which ultimately results in an increase in the amount of output and the rate of economic growth. Increasing the amount of output obtained can reduce the level of poverty in a country and can increase economic development (Jhingan, 2010).

An increase in exports is required to support economic improvement because, according to prior research, exports have a positive and significant impact on economic growth. According to the study's findings, it is necessary to play a role and improve Indonesia's export performance in order to promote economic growth (Ginting, 2017).

2.3. Import

Imports are goods from abroad that enter or are purchased by a domestic company or individual (Sukirno, 2011). Imports also have an important influence on the country's economic growth, in the Hecksher-Ohlin theory regarding imports, it is explained that a country's factors carry out product import activities, where the product requires production factors that are not available in the importing country. The import process provides benefits for the country because the country's limitations can be overcome by importing activities, compared to self-produced but not effective and even detrimental.

Some countries have a great opportunity to import goods and services that are not obtained from the production of a company located in that country, this import activity is calculated or carried out because domestic production activities are less efficient or more expensive than the exporting country. In addition to importing finished goods/products, basic materials or commodities that do not exist in a country can also be obtained by importing. For example, some countries import oil because their country is not able to produce it domestically or demand exceeds its production capacity so that it cannot be available and the solution is through import activities with oil-producing countries. Agreements in free trade and tariff provisions usually affect the determination
of goods or materials of lower value which will then be imported. The level of national income is a determining factor for the value of a country's imports, if national income is higher and the production of goods becomes lower in a country, it will result in higher imports and can cause the country's economic growth to decline.

According to earlier research, imports hinder economic expansion. This implies that there will be less economic growth if the cost of imports rises (Fitriani, 2019).

2.4. Inflation

Inflation is a condition where the price of a good or service continuously experiences a significant increase. If only one or two goods experience an increase in the price of goods, it cannot be called inflation, but if the price of the goods increases, it can have an impact and cause an increase in other goods. Most inflation is caused by an increase in other goods due to one or two types of goods whose price increases (Boediono 2014).

Inflation is classified into several types, according to why inflation is divided into:
1) Demand-pull inflation, namely inflation caused by increased demand for goods but production conditions are no longer possible to produce goods anymore due to the opportunity for full employment or almost towards full employment. In conditions when there is almost full employment, prices increase and the increase in total demand results in production or output also experiencing an increase in total demand. 2) Cost-push inflation, the occurrence of these conditions is usually seen from rising prices while production decreases. This is usually associated with a recession. This condition occurs due to the decrease in total output in production.

1) Prices have increased, the price of goods is more expensive today than before.
2) General in nature, is general because the increase in the price of an item has an impact on the increase in the price of other goods.
3) Takes place at a certain period and occurs continuously, The time span to be able to calculate inflation is a minimum of monthly required time. If the price increase occurs for a long time, it can be categorized as inflation.

Growth in the economy and inflation According to prior studies, the economic growth of Indonesia between 2016 and 2020 will be significantly and negatively impacted by inflation. The occurrence of this condition is due to the emergence of the Covid-19 pandemic that spreads in Indonesia and has an impact on rising fuel prices and basic necessities, decreasing public interest in purchasing and increasing the number of unemployed (Salim & Fadilla, 2021).

3. RESEARCH METHODS
3.1. Data and Source

This research uses quantitative research methods. Sugiyono (2016), explains the definition of quantitative method, namely the method used in scientific research that describes an event that can be categorized, can be observed and measured, is real, the relationship of variables is causal by using numbers as research data. This study clarifies the relationship between the dependent variables Exports, Imports, and Inflation and the independent variable economic growth. The data used has a time series from 1990-2020. And the secondary data used is sourced from the World bank.
3.2. Variable Operational Definition

The variables used in the study are separated into two categories: the dependent variable and the independent variable. In this study, economic growth is the dependent variable, while exports, imports, and inflation are the independent variables. The following are the definitions of the study's variables: first, Gross Domestic Product (GDP), which is the total gross value of all producers, including the added value of taxes, then subsidies, which are not part of a product's value. In this study, the annual growth rate of the GDP is computed using market prices adjusted for Indonesian currency. The World Bank is the source for data on the growth of the GDP at constant prices. Exports are sales that originate within the country and are distributed abroad as goods or commodities via international trade. This study utilizes exports of goods and services proportional to the value of all other exports. These services include the value of merchandise, insurance, cargo, transportation, fees, permit fees, and communication, construction, finance, information, business, personal, and government services, among others. Thirdly, import is the process of incorporating foreign products into international trade. In this study, imports are defined as imports of goods or services proportional to the value of all other market goods or services distributed by other nations that are linked to international trade markets. Import services include the value of merchandise, cargo, insurance, transportation, travel, royalties, and license fees, as well as communication, construction, finance, information, business, personal, and government services. Fourth, inflation is a continuous rise in the prices of goods and services of a general nature that occurs over a specific period of time.

3.3. Analysis Tools

In this study, a time series data model in the form of an error correction model or ECM (Error Correction Model) is used to determine the problem under investigation, assuming that there is no stationary occurrence of data at the level level, but that cointegration occurs at a stationary degree of integration and variable. The model utilized to correct imbalances between the short- and long-term. Ordinary Least Square is the model used for multiple regression (OLS). The following is the model used:

General model of multiple regression:

\[ Y_t = \alpha_0 + \alpha X_t + \varepsilon_t \]

Common Error Correction Model (ECM):

\[ \Delta Y_t = \alpha_0 + \alpha_1 \Delta X_t - 1 + \alpha_2 \Delta ECT - 1 + \varepsilon_t \]

Ordinary Least Square (OLS) multiple regression model:

\[ GDP_t = \alpha_0 + \alpha_1 \text{LOG}_{\text{EXPORT}}t + \alpha_2 \text{LOG}_{\text{IMPORT}}t + \alpha_3 \text{LOG}_{\text{INFLATION}}t + \varepsilon_t \]

Model Error Correction Model (ECM):

\[ GDP_t = \alpha_0 + \alpha_1 \Delta \text{LOG}_{\text{EXPORT}}t + \alpha_2 \Delta \text{LOG}_{\text{IMPORT}}t + \alpha_3 \Delta \text{LOG}_{\text{INFLATION}}t + ECT_t - 1 \]
Description:
GDP<sub>t</sub> = Economic Growth
LOG_EXPORT<sub>t</sub> = Real exports
LOG_IMPORT<sub>t</sub> = Real imports
LOG_INFLATION<sub>t</sub> = Inflation
α<sub>0</sub> = Constant
α<sub>1</sub>, α<sub>2</sub>, α<sub>3</sub> = Coefficient
ε<sub>t</sub> = Error term
ECT<sub>t-1</sub> = Error Correction term

The method of analysis utilized in this study is descriptive quantitative analysis employing theory and related prior research. The purpose of data analysis is to facilitate the descriptive reading of numerical data or graphs. In this investigation, the data were analyzed with Microsoft Excel 2010 and then processed with E-Views 10. This was applied to obtain more precise results and to show the different effects of each dependent variable on the independent variable. In analyzing the research data, several stages of testing were carried out including: Stationarity Test (Unit Root Test), Stationarity test aim for the stationary of the time series data used in the study.

Basically, the research data used is time-sequential data, but it often causes results that are not stationary at each level. Therefore, differentiation needs to be done many times to get stationary results. So that we know the data used is stationary or not, the steps taken are unit roots test or not. The test is conducted using the Augmented method; if there is no unit root, the data are considered stationary; if there is a unit root, the data are considered non-stationary. Dicky Fuller (Armed Forces of the United States), using the following research hypothesis: The ADF method's estimation calculation results will be compared to the McKinnon critical value with critical points of 1%, 5%, and 10%. If the value of t-statistic is less than the critical value, McKinnon accepts H<sub>0</sub>, which indicates the data are not stationary and a unit root exists. If the value of t-statistic is greater than the critical value of McKinnon, H<sub>0</sub> is rejected, indicating that the data is stationary and no unit root has been identified.

The following phase is cointegration. Cointegration is a long-term relationship between variables that is not stationary in each variable, but a linear combination of all variables stabilizes the data. The ECM method allows for the possibility of a long-term relationship between variables due to the nonstationary nature of the variable. In order to obtain a long-term balance, it is necessary to look at the value of fluctuations in the range at zero in the error balance. Or it can be said that the error term becomes a stationary time series data. The cointegration test aims to see the level of integration of each variable.

The next step is ECM, which is used to determine if there is a mismatch between the short- and long-term perspectives. Sargan introduced the model, while Engleharten-Granger popularized it. The ECM model is a concept of an econometric model that aims to balance the short-term and long-term balances over a specified time period through an adjustment process.
4. RESULTS AND DISCUSSION

4.1. Result

It is necessary to test the data to be able to analyze the results of the calculation of the ECM model in the short or long term. In this study, the data needs to be tested for stationarity through two stationarity tests, namely the unit root test and the cointegration test. The Augmented Dickey Fuller (ADF) test is the basis for testing stationarity on the data used in the study, the calculation process uses the help of an econometric calculation program, namely the EViews 10 program. In conducting the unit root test it is necessary to include an intercept but not include the time trend of certain tests in the test. DF, then enter the intercept and the time span when the ADF test was carried out.

Table 5. Unit Root Test Results with Augmented Dickey-Fuller test at Level

<table>
<thead>
<tr>
<th>ADF Statistics</th>
<th>Sign</th>
<th>Critical Value 1%</th>
<th>Critical Value 5%</th>
<th>Critical Value 10%</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Variable - 4,046,406</td>
<td>&lt;</td>
<td>-3,670.170</td>
<td>-2,963,972</td>
<td>-2.621.007</td>
<td>Stationary</td>
</tr>
<tr>
<td>Export Variables -2,205,660</td>
<td>&gt;</td>
<td>-3,670.170</td>
<td>-2,963,972</td>
<td>-2.621.007</td>
<td>Not Stationary</td>
</tr>
<tr>
<td>Import Variables -2,399,742</td>
<td>&gt;</td>
<td>-3,670.170</td>
<td>-2,963,972</td>
<td>-2.621.007</td>
<td>Not Stationary</td>
</tr>
<tr>
<td>Inflation Variable -5,427,091</td>
<td>&lt;</td>
<td>-3,670.170</td>
<td>-2,963,972</td>
<td>-2.621.007</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Source: Eviews 10

The results of testing the data presented in table 5 indicate that two of the four variables are not degree-level stationary. GDP and inflation are the only stationary variables, while export and import variables are not stationary. In order to satisfy the requirements of ECM regression, it is necessary to perform a process of differentiation on each obtained data so that the data can be stationary to the same degree. Then, using the same test method as described previously, the results of the Augmented Dickey Fuller (ADF) unit root test were obtained at the first difference degree and are presented in the following table.

Table 6. Test results of unit roots with Augmented Dickey-Fuller test on First Different

<table>
<thead>
<tr>
<th>ADF Statistics</th>
<th>Sign</th>
<th>Critical Value 1%</th>
<th>Critical Value 5%</th>
<th>Critical Value 10%</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Variables -5,668,533</td>
<td>&lt;</td>
<td>-3,689,194</td>
<td>-2,971,853</td>
<td>-2.625,121</td>
<td>Stationary</td>
</tr>
<tr>
<td>Import Variables -4,007,885</td>
<td>&lt;</td>
<td>-3,711,457</td>
<td>-2.981.038</td>
<td>-2,629,906</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Source: Eviews 10
The results of the ADF unit root test show that the data is stationary in the first difference level. After the stationary data requirements have been at the same level, the next stage is cointegration testing in order to determine the long-term relationship. In this study, the cointegration test was carried out by using the ADF tester. ADF testing was carried out to check the stationary cointegration regression residual.

Table 7. Unit root test results on residuals with ADF test

<table>
<thead>
<tr>
<th></th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistics</td>
<td>-3,997,714</td>
<td>0.0045</td>
</tr>
<tr>
<td>Test critical values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1%</td>
<td>-3,670,170</td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td>-2,963,972</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>-2,621,007</td>
<td></td>
</tr>
</tbody>
</table>

Source: Eviews 10

According to the results of the ADF test, the residuals in the long-term equation are stated to be stationary in degrees, as the ADF statistic is significantly greater than the critical value at the 1 percent, 5 percent, and 10 percent levels, and the probability value demonstrates a value of 0.0045. Consequently, it is determined that the unit root is not present in the residuals, and the ECM model is deemed to be satisfied. Using eviews and OLS regression testing, the results of the ECM model over the long-term were evaluated. In order to obtain the results shown in the following table:

Table 8. Estimation Results of the ECM Model in the Long Run

<table>
<thead>
<tr>
<th>Dependent Variable: GDP</th>
<th>Method: Least Squares</th>
<th>Date: 05/28/22 Time: 11:09</th>
<th>Sample: 1990 2020</th>
<th>Included observations: 31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Std. Error</td>
<td>t-Statistic</td>
<td>Prob.</td>
</tr>
<tr>
<td>C</td>
<td>3.509817</td>
<td>2.843021</td>
<td>1.234538</td>
<td>0.2276</td>
</tr>
<tr>
<td>EXPORT</td>
<td>-0.066556</td>
<td>0.129019</td>
<td>-0.515863</td>
<td>0.6101</td>
</tr>
<tr>
<td>IMPORT</td>
<td>0.192237</td>
<td>0.138791</td>
<td>1.385088</td>
<td>0.1774</td>
</tr>
<tr>
<td>INFLATION</td>
<td>-0.245459</td>
<td>0.055460</td>
<td>-4.425905</td>
<td>0.0001</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.568618</td>
<td></td>
<td></td>
<td>4.494304</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.520687</td>
<td></td>
<td></td>
<td>3.970022</td>
</tr>
<tr>
<td>SE of regression</td>
<td>2.748543</td>
<td></td>
<td></td>
<td>4.979933</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>203.9712</td>
<td></td>
<td></td>
<td>5.164964</td>
</tr>
<tr>
<td>Likelihood logs</td>
<td>-73.18896</td>
<td></td>
<td></td>
<td>5.040248</td>
</tr>
<tr>
<td>F-statistics</td>
<td>11.86319</td>
<td></td>
<td></td>
<td>1.490211</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000039</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: eviews 10

Long-term OLS calculation results using the ECM model are presented in Table 8. The purpose of the regression calculation is to establish the relationship between the dependent and independent variables. This study tests the rate of economic growth
(GDP) as a dependent variable for the export, import, and inflation variables as independent variables. The calculated R value is 0.520687, which indicates that the independent variable in the regression model can explain 52.0687 percent of the variation in the dependent variable. Long-term independent variables such as exports, imports, and inflation that have an interdependent effect on the rate of economic growth are described by the F-statistic of 11.86319.

Using a significance level of 5%, an analysis of the variables reveals that significance exists in the inflation variable, but not in the export and import variables. It can be concluded that inflation has a significant effect on economic growth over the long term, whereas exports and imports do not have a significant effect. Economic expansion is unaffected by the increase or decrease in exports and imports.

Based on the regression results, it is possible to determine if inflation has a negative and significant impact on economic growth. If the inflation rate increases by 1 percent, the economic growth rate will decrease by 0.245459 percent. In contrast, if the inflation rate decreased by 1 percentage point, the economic growth rate would increase by 0.245459 percentage points.

The estimation results of the Error Correction Model (ECM) in the short term are presented in the following table 9.

<table>
<thead>
<tr>
<th>Table 9. Estimation Results of the Short-Term ECM Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable: D(GDP)</td>
</tr>
<tr>
<td>Method: Least Squares</td>
</tr>
<tr>
<td>Date: 05/28/22 Time: 11:18</td>
</tr>
<tr>
<td>Sample (adjusted): 1991 2020</td>
</tr>
<tr>
<td>Included observations: 30 after adjustments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.227754</td>
<td>0.451335</td>
<td>-0.504623</td>
<td>0.6182</td>
</tr>
<tr>
<td>D(EXPORT)</td>
<td>-0.434796</td>
<td>0.189562</td>
<td>-2.293682</td>
<td>0.0305</td>
</tr>
<tr>
<td>D(IMPORT)</td>
<td>0.173149</td>
<td>0.113288</td>
<td>1.528392</td>
<td>0.1390</td>
</tr>
<tr>
<td>D(INFLATION)</td>
<td>-0.096291</td>
<td>0.057365</td>
<td>-1.678554</td>
<td>0.1057</td>
</tr>
<tr>
<td>ECT(-1)</td>
<td>-0.842672</td>
<td>0.212691</td>
<td>-3.961949</td>
<td>0.0005</td>
</tr>
</tbody>
</table>

| R-squared    | 0.788859    |            | -0.310389   |        |
| Adjusted R-squared | 0.755076 | SD dependent var | 4.925982 |        |
| SE of regression | 2.437857 | Akaike info criterion | 4.771127 |        |
| Sum squared resid | 148.5786 | Schwarz criterion | 5.04660 |        |
| Likelihood logs | -66.56691 | Hannan Quinn Criter. | 4.845837 |        |
| F-statistics  | 23.35106   | Durbin-Watson stat  | 1.509887 |        |
| Prob(F-statistic) | 0.000000 |                      |        |        |

Source: eviews 10

Table 9 shows the estimation results obtained by a coefficient value of -0.842672 for the ECT variable, indicating that if there is a disparity between the growth rate and the equilibrium value, it can be corrected within one year. The ECT coefficient is used to identify the regressand response in each period that deviates from the equilibrium. With an ECT value of -0.842672 and a probability of 0.0000, indicating a significance level of 5%, it can be concluded that the ECM model is valid in the short term.
The adjusted R-square value is 0.755076, it shows that if it is worth 75.5076%, the variation of economic growth variables is interrelated and can affect the independent variables, namely exports, imports and inflation. Furthermore, as much as 24.4924% of the influencing factors were other variables that were not examined. The F-statistic value of 23.35106 describes the independent variables, namely exports, imports and inflation, which have interrelated effects on the rate of economic growth.

The significance value of the variable exports is 5%, whereas imports and inflation are not significant in the short term. Imports and inflation have no impact on economic growth over the next five years. Increases or decreases in import prices and inflation have no effect on economic growth.

4.2. Discussion

On a long-term basis, inflation has a significant effect on economic growth, whereas exports and imports have no significant effect on economic growth. A country's economic growth is unaffected by the increase or decrease in the value of its exports and imports. On the basis of the regression analysis, it can be concluded that inflation has a negative and significant impact on economic growth.

Inflation has a negative effect in accordance with previous research, in Ardiansyah (2017), explained that the inflation variable has a substantial negative impact on economic growth. If inflation rises, economic growth will decline, and if it falls, economic growth will increase.

Imports and inflation have no effect on economic growth in the short term, whereas exports have a negative effect on economic growth in the short term.

Exports have a negative and significant effect on economic growth. If rupiah exports increase by 1%, what happens is that the economic growth rate decreases by 0.434796%. But if exports decrease by 1% what happens is the economic growth rate increases by 0.434796%. This is in contrast to previous research, namely according to Siregar et al. (2019), exports have a positive effect on the level of economic growth in Indonesia in the period 2013–2017.

Nonetheless, according to one study, exports have a negative effect on economic growth (Adnan & Fernandi, 2022). Asbiantari (2016), explains that there is a correlation between exports and economic growth, but the correlation is negative or inverse. This means that an increase in the value of exports will result in a decline in the economic growth of the country.

5. CONCLUSION

The inflation variable has a negative and significant effect on economic growth over the long term, meaning that if the inflation rate increases, economic growth will decline. However, export and import variables have no effect on the economic growth of Indonesia from 1990 to 2020.

The export variable has a negative and significant effect on economic growth in Indonesia in the short term, so an increase in export value will have a negative impact on economic growth. According to previous research, exports have a positive impact on Indonesia's economic growth between 1990 and 2020.
REFERENCES