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Research Article

The Effect Of Export-Import On Economic Growth During The Covid-19 Pandemic In Indonesia: An Investigation From Multiple Geographical Settings In Indonesia And Across Borders

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Abstract

The pandemic that occurredklin Indonesia has theklpotential to slow downklthe economy. Indonesia's export andklimport activities experienced disruptionklduring the pandemic because it occurred in almost all countries of the world. This study aims to determine the effect of exports and imports from multiple geographical locations across the borders on economic growth during the Covid-19 pandemic in Indonesia. This study uses multiple linear regression methods to answerklthe research hypotheses. Throughoutklthe pandemic thatkloccurred in Indonesia during 2019-2021, GDPklgrowth was determinedklby export andklimport activities. Theklresults of theklanalysis also show that an increase inklexports will resultklin a decrease inklGDP, while an increaseklin imports will causeklan increaseklin GDP. The rate of import and export was found slightly different in different geographical locations in Indonesia and across the borders.

Keywords

Export, Import, GDP

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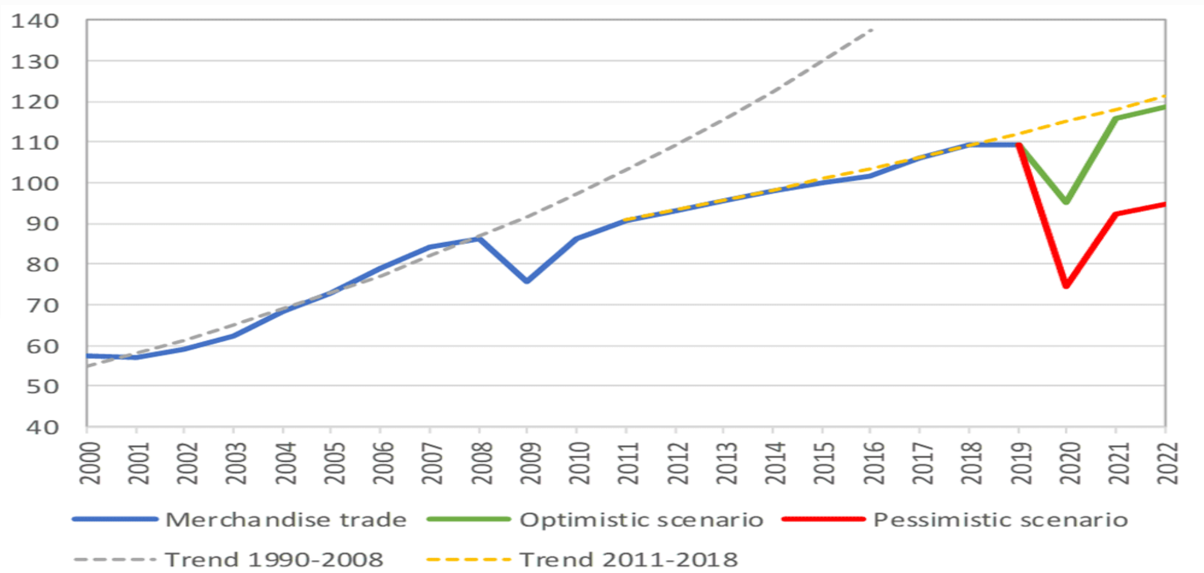
Introduction

The year 2020 is an important year in determining the direction of Indonesia's economic growth in the future. Indonesia's economic growth faces completely different challenges from previous years. *The Center for Strategic and International Studies* (2020) states that the level of economic crisis due to the Covid-19 pandemic depends on the policy choices taken by the government, and how much economic support the government is willing to use during the pandemic and after the pandemic. The WTO explains that world trade will fall between 13% - 32% in 2020 due to the disruption to normal economic activities and normal human life due to the COVID-19 pandemic. (WTO, 2020).
Verikios, Sullivan, Stojanovski, Giesecke, and Woo (2011) also confirmed that the pandemic will reduce business investment due to increased uncertainty and risk, leading to overcapacity. Similarly, consumer confidence will decline due to uncertainty and fear, leading to reduced spending as people choose to stay at home to reduce the chance of infection — this is another example of risk modifying behavior. Reduced consumer confidence can particularly affect services that involve face-to-face contact (e.g., tourism, transportation, and retail shopping). James and Sargent (2006) argue that evidence from past pandemics suggests that most discretionary spending (e.g., tourism and transport) is reduced.
Thus, in general the pandemic will still have an impact on the difficulty of economic recovery to return to its original balance (before the pandemic), because the pandemic attacks the supply side with loss of production time, working hours, hampered supply of raw materials. At the same time from the demand side, where in the short-term people will stop their productivity activities, and in the long-term they will be more careful in spending their money, and prefer to save, or insure themselves. Based on the WTO data, it is known that trade had slowed down in 2019 before the virus hit, weighed down by trade tensions and slowing economic growth. World merchandise trade recorded a slight decline this year by -0.1% in terms of volume after rising by 2.9% in the previous year. Meanwhile, the dollar value of world merchandise exports in 2019 fell 3% to US$ 18.89 trillion. In contrast, world trade in commercial services increased in 2019, with dollar-denominated exports increasing 2% to US$6.03 trillion. The pace of expansion was slower than in 2018, when trade in services increased by 9%.



Gambar 1. 1 Trend Perdagangan Dunia dengan Disrupsi Covid-19

The WTO view also agrees with research by BLOOM and CANNING (2004), that the direct costs of an epidemic are clear, while the long-term costs are unclear. So that the WTO also has the conclusion that no matter how good the efforts made by international institutions, and countries in the world, the economic effects of the pandemic will still be felt in the long term. Fernandes (2020) predicts that the decline in GDP due to the COVID-19 pandemic will depend on the duration of the lockdown, and GDP growth will be hit on a small scale between 3%-6% decline, on a medium scale GDP will decline by 10%, and the worst is expected to reach 15%

GDP decline. Countries that are oriented towards service businesses will be negatively affected, and have more risky jobs. Countries that depend on tourism and foreign trade will be more negatively affected by the Covid-19 pandemic. In this regard, Indonesia has a higher proportion of exports in the non-oil and gas sector compared to the oil and gas sector. Likewise with imports, the non-oil and gas sector has a larger proportion than the oil and gas sector. The main destination countries for non-oil and gas exports are China, the United States, Japan, Singapore, and India. It is known that China and the United States are the countries with the largest number of Covid-19 cases and deaths in the world. In other words, Indonesia's main export destinations are countries that have also experienced the impact of the COVID-19 pandemic, and implemented a lockdown as an effort to prevent the spread of the virus, and practically the economy was temporarily halted.

Meanwhile, the main countries for non-oil and gas imports to Indonesia are China, Japan, Singapore, Thailand and the United States. In other words, Indonesia is also locked in the distribution of non-oil and gas goods to and from export and import destination countries that have been Indonesia's main foreign trade partners. The non-oil and gas sectors that dominate Indonesia's exports are the processing, mining, and agriculture industries in 2019-2020. As for the provinces (based on goods & port of loading) the largest exports came from West Java, East Java, East Kalimantan, Riau, Kep. Riau, and DKI Jakarta. Provinces with the largest proportion of exports in Indonesia, such as West Java, East Java, and DKI Jakarta, have implemented PSBB (Large-Scale Social Restrictions) in which economic activities were forced to be temporarily suspended. Meanwhile, provinces such as East Kalimantan, Riau, and Riau Islands have partially implemented PSBB in certain cities and regencies.

In addition, from the import side, Indonesia's import value is dominated by raw/auxiliary goods, then capital goods, and consumer goods originating from China, Japan, Singapore, Thailand, and the United States. So that practically Indonesia's manufacturing activities will experience disruptions, first due to the implementation of PSBB in provinces affected by COVID-19, and export barriers due to destination countries, as well as barriers from countries of origin for imports to Indonesia.

Bank Indonesia's explanation certainly contrasts with the view of the WTO which explains that the world economy will be difficult to recover/recover at least until 2022. Several studies (Jorda, 2020) also illustrate that the economic crisis caused by the pandemic is different from the economic crisis. Because the economic crisis caused by the pandemic attacks the supply side and the demand side. Business actors and companies will experience a big shock because they have to stop the production process at almost the same time. People will be more careful in their consumption, due to the high uncertainty of the duration of the pandemic (BLOOM & CANNING, 2004). The existence of this pandemic will cause disruption in economic activity. This study will conduct a study on the effect of export and import on economic growth during the Covid-19 pandemic in Indonesia.

Literature Review

Economic Growth

Gross domestic product is often considered as a measure to see the best measure of economic performance, GDP is the value of all goods and services produced by a country in a certain period, and the purpose of GDP is to summarize economic activity in a single money value over a certain period of time. In an economy there is a production process, by converting inputs, such as labor and capital into output, so there are two ways to look at the calculation of GDP, the first is GDP as the total income of everyone in the economy, and the second is GDP as total expenditure on the economy's output of goods and services.(Denis, 2021)

Export Import

Exports and imports of a country occur because of the benefits derived from foreign trade transactions. Trade can also increase the consumption capacity of a country and help various businesses to carry out development and increase the role of sectors that have a comparative advantage due to efficiency in factors of production.(Pratama, 2021) stated that exports come from domestic production sold/used by residents abroad, so exports are an injection into the income stream as well as investment. Meanwhile, imports are a leakage of income, because they cause capital flows abroad. Net exports, namely exports minus imports (X-M) is a bridge that connects national income with international transactions (Syaikhu N, 2010:14).

Methodology

Data

The data used in this study is secondary data sourced from the Central Statistics Agency for the period of 2019 to 2021. The data used are data export (million US$), import (million US$), gross domestic product (percentage).(Septiarini, Taufik, Afif, & Masrifah, 2020)

Research Hypotheses

The hypotheses in this study are as follows:
H_1: export berpengaruh signifikan terhadap GDP;
H_2: import berpengaruh signifikan terhadap GDP;
H_3: export and import berpengaruh signifikan terhadap GDP.

Model dan Metode Analisis

This study uses multiple linear regression methods to answer the research hypotheses. The stages in performing multiple linear regression are the basic assumption tests (normality test dengan menggunakan Jarque-Bera) and classical assumption tests (heteroscedasticity test dengan menggunakan Breusch-Pagan-Godfrey), autocorrelation test (dengan menggunakan Breusch-Godfrey Serial Correlation LM Test), and multicollinearity test dengan menggunakan VIF) . The multiple linear regression model is as follows:

$$\mathbf{GDP_t = \alpha + \beta_1 \, Export_t + \beta_2 \, Import_t + \varepsilon}$$

Where α is a constant and β is the regression coefficient. The level of significance used was 5% (α = 5%). In doing calculations, the help of Eviews 10 software is used.

Result

Based on the results of testing the basic assumptions (normality test), it is known that both the residual data show a normal distribution, with each probability value of 0.167 dimana jika dibandingkan dengan alpha maka 0.167 > 0,05. The results of testing the classic assumptions of heteroscedasticity, autocorrelation and multicollinearity show that there is no violation of the classical assumption test. Berikut hasil pengujian regresi linear berganda:

Table 1.
Estimated Results

Variables	Coefficients	Std. Error	Prob.
C	-52.43633	44.42793	0.2490
EXPORT	-18.87524	6.562121	0.0081
IMPORT	24.67727	4.956453	0.0000
R-squared	**0,506**		
F-statistic	**12,809**		
Prob (F-statistic)	**0,000**		

Source: Calculation result

Based on the results of the calculation of multiple and multiple linear regression estimates, the respective equations are obtained as follows:

$$\mathbf{GDP = -52.43633 - 18.87524 \, Export_t + 24.67727 \, Import_t + \varepsilon}$$

Based on Table 1 and the above equation, maka dapat diketahui bahwa:

- The constant value (α) obtained is -52.43633. This shows that if exports and imports are 0 then GDP will be worth 52,43633 units.
- The value of the regression coefficient for the export variable (β1) is -18,87524. This shows that if there is an increase in exports by one unit and the other variables are constant, then GDP will decrease by 18,87524. The p-value obtained is 0.0081. When compared to alpha 5%, the p-value < or 0.0081 < 0.05, so H0 is rejected, which means that exports have a significant effect on GDP.
- The value of the regression coefficient for the imported variable (β2) is 24,67727. This shows that if there is an increase in exports by one unit and the other variables are constant, then GDP will also increase by 24,67727. The p-value obtained is 0.0000. When compared to alpha 5%, the p-value < or 0.0000 < 0.05, so H0 is rejected, which means that imports have a significant effect on GDP.
- The value of Prob (F-statistic) obtained is 0.000. When compared to alpha 5%, the p-value < or 0.0000 < 0.05, so H0 is rejected, which means that exports and imports have a significant effect on GDP.
- The r-square value obtained is 0.506. This shows that the ability of exports and imports to explain GDP is 50.6%, the remaining 49.4% is explained by other variables not examined in this study.

Discussion

All through 2019-2021 it is appeared, based on the comes about of the investigation, that the increment in GDP happened due to a decrease in trades. Conversely, when there is an increase in exports, the GDP will decrease. The results of this study prove that during the pandemic that occurred in Indonesia (2019-2021), the increase in exports actually resulted in a decrease in GDP, because other countries that cooperated with Indonesia for exports also experienced a pandemic, and resulted in a decline in economic growth. So that when Indonesia exports raw materials, while the receiving country does not carry out the production process, the exported goods will not be absorbed, resulting in losses for Indonesia. Other studies also show that the development of a country's GDP is determined by the value of its exports (Can, Dogan, & Saboori, 2020; Hendriana, 2021; Okyere & Jilu, 2020)

Meanwhile, the increase in GDP was also triggered by an increase in imports. On the other hand, a decrease in imports will result in a decrease in the value of GDP. In the domestic production process, Indonesia relies on materials or components from abroad which are imported through import schemes. Meanwhile, the pandemic that occurred resulted in a decrease in the productivity of producers of raw materials needed in Indonesia. So, when there is a decrease in imports, domestic production activities will be hampered, and reduce GDP. Conversely, when there is import activity, domestic production activities will increase, and result in an increase in GDP. Other studies also show that imports will have a significant impact on GDP.(Bakari, 2017; Marwanti & Irianto, 2017; Rani & Kumar, 2018)

Conclusion

Throughout the pandemic that occurred in Indonesia during 2019-2021, GDP growth was determined by export and import activities. The results of the analysis show that an increase in exports will result in a decrease in GDP, while an increase in imports will cause an increase in GDP. The rate of import export was observed to show a slight variance as per the geographical variations.

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