

COVID 19 IMPACT TO REGIONAL ECONOMIC GROWTH AND INTERNATIONAL TRADE IN INDONESIA

Eddy Junaidi¹⁾, Miftakhul Jannah²⁾, Khusnudin Tri Subhi³⁾, Muhammad Rizki Yudistira⁴⁾

¹Badan Pusat Statistik Indonesia
email: eddy.junaidi@bps.go.id

²Badan Pusat Statistik Indonesia
Email: miftakh.jannah@bps.go.id

³Badan Pusat Statistik Kabupaten Sigi
email: tri.subhi@bps.go.id

⁴Badan Pusat Statistik Kabupaten Berau
email: mr.yudistira21@gmail.com

ABSTRACT

Covid-19 is a global health problem, including in Indonesia. In Southeast Asia, Indonesia is ranked first in the number of positive cases of Corona since June 17, 2020. Covid-19 cases in Indonesia are increasing every day and on November 9, 2020, the total number of Covid-19 cases in Indonesia is 440,569. The increase in the number of Covid-19 cases had an impact on the economic side where Indonesia's economic growth rate decreased and in the third quarter it was -3.49 percent. In addition, the export and import sectors also experienced decline. This research aims to analyze the impact of Covid-19, exports, imports and investment on Indonesia's economic growth and the impact of Covid-19 and investment on exports and imports in Indonesia. This study uses panel regression analysis with periods of data from the first quarter to the third quarter of 2020. The results show that the Covid-19 case has negative and significant effect on economic growth, while exports, imports and domestic investment do not have significant effect on economic growth. On exports and imports, Covid-19 has negative and significant effect on exports and imports while domestic investment has positive and significant impact on exports and imports in Indonesia.

Keywords: Covid-19, growth rate, panel regression, time series

1. INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease that might people experience mild to moderate respiratory illness caused by a newly discovered coronavirus (World Health Organization). Coronavirus spread all over the world and currently, November 10th 2020 there are 51,156,191 of Covid-19 cases in the world and has caused 1,267,715 deaths. COVID-19 is a global health problem including Indonesia. In the Southeast Asia region, Indonesia ranks first positive cases of corona since June 17, 2020.

Indonesia first reported 2 positive cases of Corona on March 2, 2020 and currently positive cases continue to increase, three weeks later on March 20, 2020, the number of positive patients with COVID-19 jumped significantly to 369 people (Ministry of Health Indonesia, 2020). This condition is concerning and has a wide impact, ranging from social to economic. The economic impact caused by the increased spread of COVID-19 can be felt, starting from the panic buying phenomenon. On November 9, 2020, the total cases of Covid-19 in Indonesia were 440,569, and 372,266 had recovered and caused the death of 14,689 people.

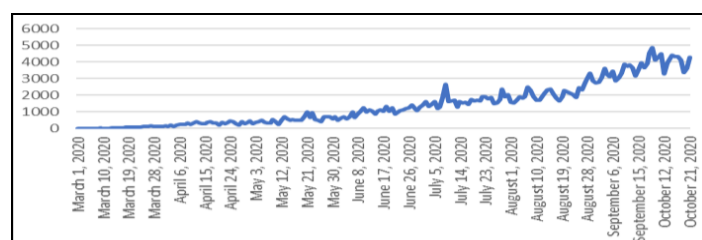


Figure 1. Covid-19 Cases in Indonesia

Source: Ministry of Health

The spread of COVID-19 that has been controlled in several countries, including China and Australia, is different from what happened in Indonesia. When the curve starts to slope, indicating a slowdown in the growth of COVID-19 patients, conditions in Indonesia show a significant increase in the growth of COVID-19 patients. In terms of mortality rates, the data available as of March 20, 2020 shows a fairly high percentage when calculated from the ratio of the number of COVID-19 patients who died (32 people) to the number of positive cases of COVID-19 (369 people) in Indonesia, which is 8,67 percent.

The increasing number of COVID-19 cases has affected the economy, especially Indonesia. Several countries have implemented lock down policies to prevent further Covid-19. Thus hampering economic activity and putting pressure on world economic growth. In Indonesia, in order to break the chain of transmission of the Covid-19 outbreak, some regions have implemented a Large-Scale Social Restriction or PSBB policy. The implementation of the PSBB is contained in Government Regulation Number 21 of 2020 which was enacted by President Joko Widodo at the end of March 2020. This regulation stipulates restrictions on several places and activities, including school and work vacations, restrictions on religious activities, and / or restrictions on activities in public places or facilities. The existence of Covid-19 and the implementation of PSBB caused a decline in economic growth in Indonesia.

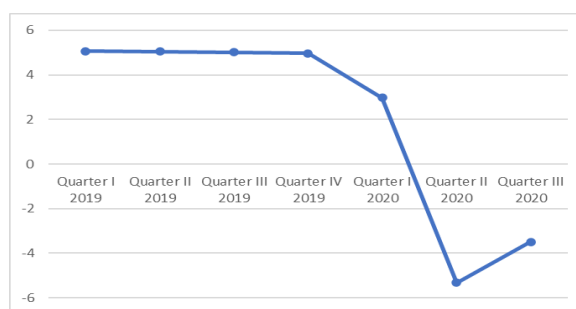


Figure 2. Economic Growth Rate Quarterly against the Same Quarter of the Previous Year (Y-on-Y)

Source: Statistics Indonesia

Statistics Indonesia has recorded that the rate of economic growth in the first quarter (January-March) 2020 grew only 2.97 percent. Economic growth decreased compared to the fourth quarter of 2019, which was 4.97 percent. In fact, economic growth is far below the achievement in the first quarter of 2019 which reached 5.07 percent. Then in the second quarter of 2020 Indonesia's economic growth rate was minus 5.32 percent which is inversely proportional to the second quarter of 2019 of 5.05 percent.

The Indonesian economy based on GDP (Gross Domestic Product) in the third quarter of 2020 at constant prices was 2,720.552 trillion rupiah. However, based on constant prices with the base year 2010 amounting to Rp. 2,589.6 trillion. Meanwhile, the value of GDP in Quarter III in 2019 is 2,818,887 trillion rupiah. When compared with the basis of constant prices or yoy (year on year), economic growth in the third quarter of 2020 contracted -3.49 percent.

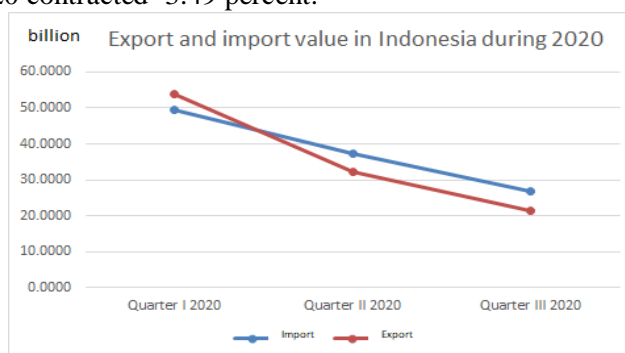


Figure 3. Export and import value in Indonesia during 2020

Source : Badan Pusat Statistik

Meanwhile, from the production side, several main sectors in Indonesia also affected by the spread of COVID-19, particularly the manufacturing industry. The contribution of this sector is quite significant to the Indonesian economy (19-20 percent) and products originating from the manufacturing industry also contribute significantly to Indonesia's total exports, which is over 70 percent. The export value in Indonesia has decreased from quarter to quarter, 49.3921 billion in the first quarter to only 26.7985 billion in the third quarter. On the other hand, imports also experienced a decline from 53.8447 billion in the first quarter to only 21.2050 billion in the third quarter. Obviously, this will be a problem and if it continues it will lead to a continuous recession. So, this paper aims to: (1) Analyze the impact of the Covid-19 case, export, import and investment on economic growth in Indonesia from the first quarter to the third quarter of 2020; (2) Analyze the impact of the Covid-19 case, and investment on export and import value in Indonesia from the first quarter to the third quarter of 2020.

There are several studies both from within the country and abroad that discuss the effects of the Covid-19 pandemic, export imports, and investment on economic growth.

Damuri and Hirawan (2020) conducted a study on the impact of Covid-19 on Indonesia's economic growth and trade in 2020. In this study, the Covid-19 pandemic caused public consumption to change where people tended not to travel and tended to increase consumption of goods, basic needs. From the production side, there is a decline in the performance of the processing industry (manufacturing). This happens because the majority of the manufacturing industry still depends on imports, one of which comes from China. This study uses a general equilibrium modeling of the Global Trade Analysis Project (GTAP).

The results obtained are that Indonesia's economic growth will decline between 1.3 to 4.7 percent. From the export side, it also experienced a decline because the export destination countries in Indonesia experienced a decline in economic growth. Meanwhile, from the import side, it is possible to experience an increase because local production decreases while the need may increase

Susilawati, Falefi, and Purwoko (2020), conducted research on the impact of the Covid-19 pandemic on the Indonesian economy. The data used in this study are secondary data collected from Indonesian online media uploaded from February to May 2020. The results of this study show that Indonesia's economic growth is -0.4 percent in the worst scenario and 2.3 percent in the best scenario. The Covid-19 pandemic has also caused exports in the manufacturing industry to decline due to decreased productivity.

In terms of investment, Nasution, Erlina, and Muda (2020) conducted research on the impact of Covid-19 on the Indonesian economy. The method used in this research is descriptive quantitative method using a secondary data analysis approach. The result of this research is that the impact of the Covid-19 pandemic causes low investor sentiment towards the market which in turn leads the market to a negative direction. The Covid-19 pandemic also affected bonds and the stock market where the increase in the Covid-19 case caused the market to fluctuate in a negative direction. In addition, the 1 percent economic slowdown in China caused economic growth in Indonesia to decline by 0.09 percent.

Firdaus (2020) conducted a study on the effect of risk, return, and the Indonesian economy on investment decisions during Covid-19. The method used in this study is linear regression analysis with the variables used are stock risk, stock return, the Indonesian economy as an independent variable and influence Covid-19 on stock investment as the dependent variable. The results of this study show that stock risk has a positive but insignificant effect on stock investment during Covid-19. Then the stock return variable has a positive and significant effect on stock investment during Covid-19. The Indonesian economy variable has a negative but not significant effect on stock investment during Covid-19.

Alikhanli (2020) examines the impact of Covid-19 on demand for automotive imports in Azerbaijan. The method used in this research is two-stage least squares (2SLS) which is based on a simultaneous equation model. The result of this research is that there is a shift in the demand and supply of automotive goods which causes a decrease in the volume of imports in Azerbaijan. This is due to changes in income and prices of automotive goods.

Mehta and Jha (2020) conducted research on the impact of Covid-19 on the economy in India. The result of this study is a decrease in imports of 13.7 percent in India due to India's dependence on China. In terms of the tourist industry, it is predicted that there will be a reduction in workers of around 70 percent and a loss of 28 billion US \$ due to the existence of Covid-19.

2. RESEARCH METHOD

This study uses balanced panel data with individual units consisting of 34 provinces and time units from the first quarter to third quarter of 2020. The use of individual units in the form of provinces aims to describe the state of the research object to represent cases of COVID-19 in all regions of Indonesia related to the economic situation of a region. In addition, the use of the quarterly time unit with the 2020 period illustrates the condition of the COVID-19 incident that has taken place in Indonesia since the first case, on March 2, 2020 until now.

The analysis conducted in this study used secondary data obtained from various sources, namely the Ministry of Health (Kementerian Kesehatan) and the Badan Pusat Statistik during the period of the 1st quarter (Q1) to 3rd quarter (Q3) of 2020. The details of the data used are as follows:

- (1) The number of positive cases of COVID-19 shows confirmed cases that have tested positive for the COVID-19 virus as proven by the PT-PCR laboratory examination, obtained from data from the Ministry of Health which is always updated every day in each province.
- (2) Economic growth shows the development of the production of goods and services in an economic area in a certain period against the value of the previous period which is calculated based on GRDP at constant prices, obtained from published data from the Badan Pusat Statistik which describes the economic situation of each province.
- (3) Exports and Imports show transactions that occur between residents of a certain country and residents outside the territory of that country, obtained from data from the Badan Pusat Statistik, which describes the state of trade in each province.
- (4) Domestic investment (PMDN) shows investment activities to conduct business in the territory of the Unitary State of the Republic of Indonesia (NKRI) which are carried out by domestic investors using domestic capital, obtained from data from the Badan Pusat Statistik Agency which represents the conditions of domestic investment in each province.

This research model is built on research and literature that assesses the impact of COVID-19 on economic conditions in Indonesia. In Damuri & Hirawan (2020), examining the impact of COVID-19 on the Indonesian economy in general, which states that the COVID-19 pandemic is causing a slowdown in production accompanied by a slowdown in the global economy, thereby reducing demand which automatically reduces Indonesia's export performance which of course will have an impact on Indonesia's trade performance. In addition, in a study by Wuryandani (2020) the economic problems caused by the COVID-19 pandemic can be seen from two different economic points of view, namely demand and supply. From the demand side, the conditions of the COVID-19 pandemic will clearly reduce the consumption sector, travel and transportation activities, and trade. Meanwhile, from the supply side, it is very likely that worker / labor productivity will be contracted, reduced investment and funding activities, and disruption of the global supply chain (global value chain).

The equation model developed in this study focuses on the effect of increasing the number of COVID-19 cases on general economic conditions and trade conditions in each province in Indonesia. The equation model is formed as follows:

Economic Growth Equation Model

$$(1) \text{EKO}_{it} = \alpha_0 + \alpha_1 \ln(\text{POSITIF}_{it}) + \alpha_2 \ln(\text{EKS}_{it}) + \alpha_3 \text{IMP}_{it} + \alpha_4 \text{PMDN}_{it} + \varepsilon_{1it}$$

Trade Equation Model

$$(2) \text{EKS}_{it} = \beta_0 + \beta_1 \ln(\text{POSITIF}_{it}) + \beta_2 \text{PMDN}_{it} + \beta_3 \text{EKS}_{i(t-1)} + \varepsilon_{2it}$$

$$(3) \text{IMP}_{it} = \gamma_0 + \gamma_1 \ln(\text{POSITIF}_{it}) + \gamma_2 \text{PMDN}_{it} + \gamma_3 \text{IMP}_{i(t-1)} + \varepsilon_{3it}$$

Where,

EKO_{it} : economic growth (percent)

POSITIF_{it} : number of additional positive cases of COVID-19 (people)

- EKS_{it} : export value (billion US \$)
- $EKS_{i(t-1)}$: lag of export value (billion US \$)
- IMP_{it} : import value (billion US \$)
- $IMP_{i(t-1)}$: lag of import value (billion US \$)
- $PMDN_{it}$: the value of Domestic Investment (trillions of rupiah)

Based on the model equation above, i shows the individual unit, namely the province (34 provinces), while t shows the unit of time, namely the quarterly period Q1 to Q3 in 2020. The coefficient α_0, β_0 and γ_0 shows the intercept parameters in each model, the coefficient $\alpha_1, \dots, \alpha_4; \beta_1, \dots, \beta_3$; and $\gamma_1, \dots, \gamma_3$ shows the slope parameters for each independent variable, as well, and shows the error term.

The analysis used in this study uses panel data regression analysis with the best model chosen is the Fixed Effect Model with cross weight. The best model is obtained from statistical test results. The first test aims to determine the best model between CEM, FEM, and REM with the Chow test and Hausman test. The test results with the Chow test show the decision to reject the hypothesis so that the chosen model is FEM, then proceed to the Hausman test which also shows the decision to reject the hypothesis, which means that the three equations can be estimated using the Fixed Effect Model. After obtaining the best model with FEM, then proceed with testing the heterogeneity of the variance-covariance and matrices cross-sectional dependence. The test results on each equation concluded that the three equation models have a heteroscedastic variance-covariance matrix with cross-sectional dependence so that the best model in the three equations is the Fixed Effect Model with estimation cross weight.

After being estimated with the FEM cross weight, assumptions are tested for each equation. Testing the classic assumption of normality using the Jarque-Berra test (Gujarati & Porter, 2008) shows that the residuals are normally distributed so that the three equations of normality assumptions have been met. Furthermore, the classical non-multicollinearity assumption test shows that there is a perfect or precise linear relationship between some or all of the explanatory (independent) variables of the regression model (Gujarati & Porter, 2008). This test uses the VIF value which shows a value less than 10 in each equation so that there is no linear relationship between the independent variables in the equation model. From the test results, the three equation models with FEM cross weight have fulfilled the classical assumptions, namely normality and non-multicollinearity.

3. RESULTS AND DISCUSSION

3.1. Descriptive Analysis

Every day, Covid-19 cases in Indonesia are always increasing. As of November 8, 2020, the number of Covid-19 cases was 3,880, bringing the total Covid-19 cases in Indonesia to 437,716 cases.)

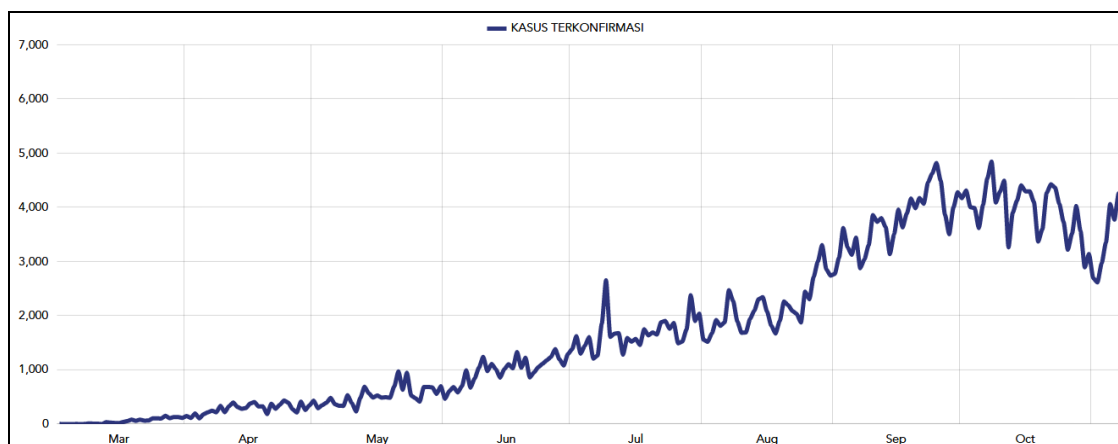


Figure 4. Confirmed of COVID-19 Cases in Indonesia from March to October 2020

Source: Ministry of Health

When viewed in the third quarter, 2 provinces are in the high category, 5 provinces are in the medium category and 27 provinces are in the low category. Provinces that fall into the high category are DKI Jakarta and East Java where the total number in each province is 73,736 cases and 43,476 cases. The provinces of North Sumatra, West Java, Central Java, South Kalimantan, and South Sulawesi are in the medium category with the respective number of Covid-19 cases as many as 10,313; 22,205; 22,435; 10,348; 15,579 cases.

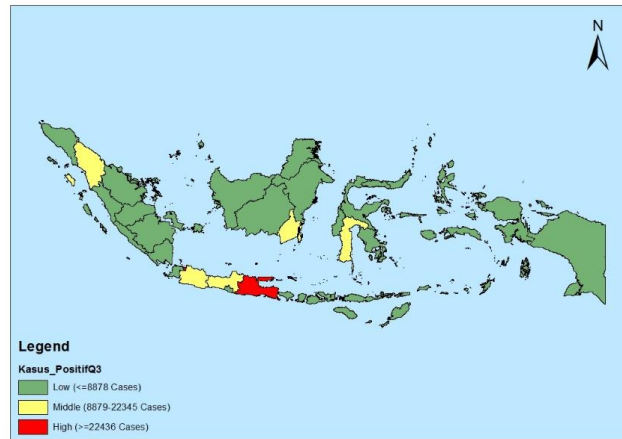


Figure 5. Mapping of COVID-19 Cases in Indonesia in Third Quarter 2020
Source: Ministry of Health

When viewed from the economic growth from the first quarter to the third quarter, almost all of provinces experienced a decline in economic growth except North Maluku which experienced an increase. In the first quarter, almost all provinces experienced positive growth except for DI Yogyakarta and Bali. In the first quarter, West Papua experienced economic growth of 5.14 percent and the highest in Indonesia, while Bali was the lowest with an economic growth of -1.17 percent. In the third quarter, only the provinces of North Maluku and Central Sulawesi experienced positive economic growth, where Maluku experienced the highest economic growth at 6.66 percent, while Central Sulawesi experienced economic growth of 2.82 percent. Bali is a province with the lowest economic growth, with -12.28 percent.

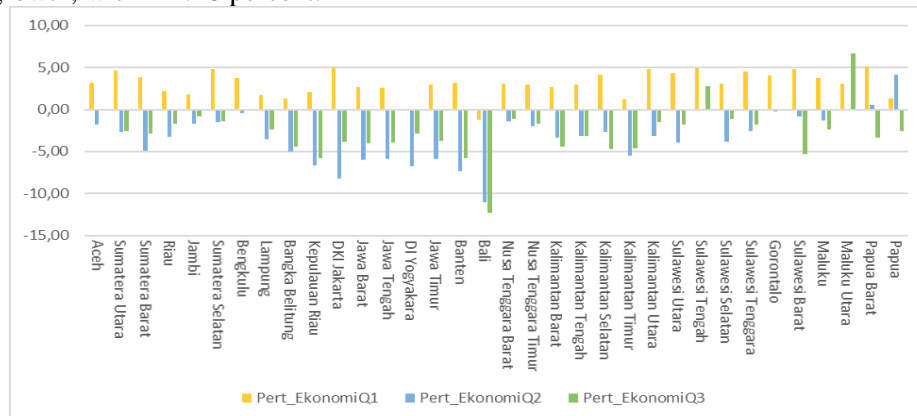


Figure 6. Economic Growth First Quarter until Third Quarter of 2020 in Each Provinces Indonesia

Source: Badan Pusat Statistik

On exports, in the first quarter to the third quarter of 2020, almost all provinces experienced a decline. In the first quarter, DKI Jakarta was the province that received the highest amount of exports, amounting to US \$ 13 billion, while the lowest were Gorontalo and West Sulawesi which in the first quarter had not yet carried out export activities. In the third quarter, almost all provinces experienced a decline in exports except for a few provinces in the eastern regions such as Papua, North Maluku and Maluku. In the third quarter, DKI Jakarta also was the province with the highest exports amounting to US \$ 9 billion while Yogyakarta was the lowest province with exports amounting to US \$ 18 thousand.

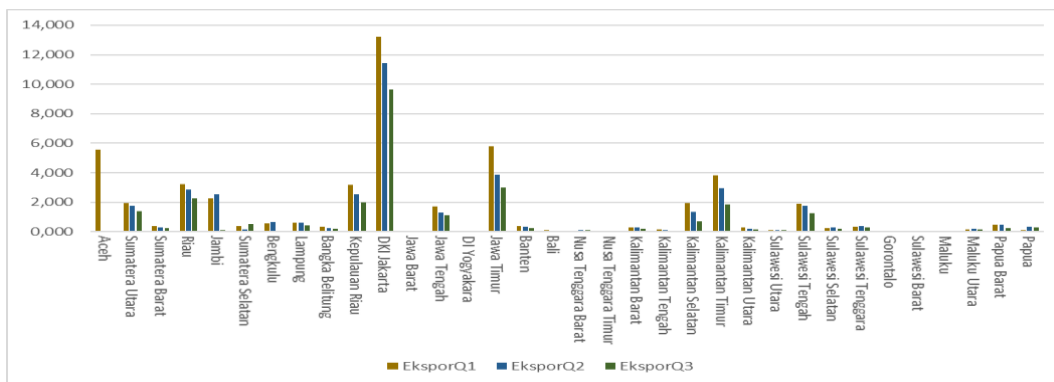


Figure 7. Export Each Provinces in Indonesia from First Quarter until Third Quarter of 2020
 Source: Badan Pusat Statistik

On imports, in the first quarter to the third quarter, almost all provinces experienced a decline. In the first quarter, DKI Jakarta was the province with the highest imports, amounting to US \$ 19 billion, while the lowest was Gorontalo with imports amounting to US \$ 39 thousand. In the third quarter, almost all provinces experienced a decline in exports except for a few provinces, that is Jambi, Yogyakarta, North Sulawesi, and North Maluku. In the third quarter, DKI Jakarta was also the province with the highest amount of imports, amounting to US \$ 10 billion. Meanwhile, West Sulawesi and Maluku were the provinces with the lowest imports.

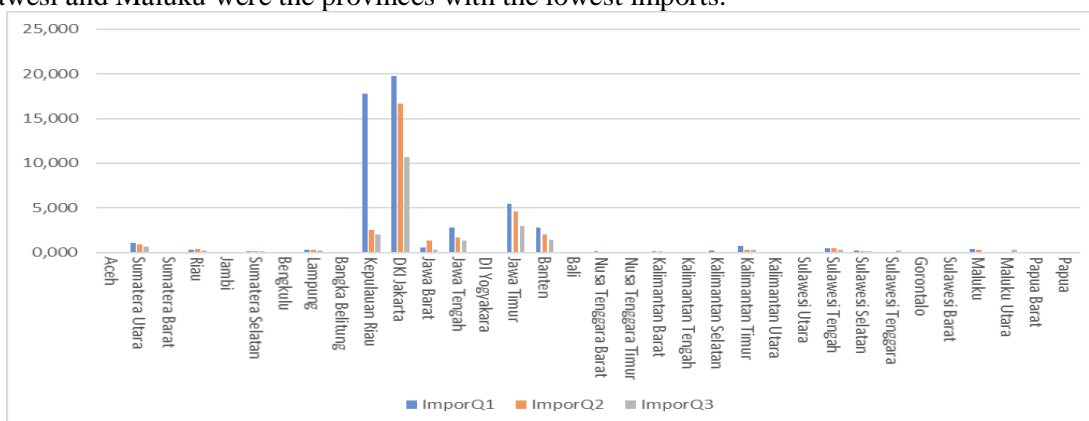


Figure 8. Import Each Provinces in Indonesia from First Quarter until Third Quarter of 2020
 Source: Badan Pusat Statistik

In terms of domestic investment, several provinces experienced increases and decreases from quarter 1 to quarter 3. Some provinces that experienced increases were Riau, Banten and East Kalimantan. Meanwhile, the provinces that experienced a decline were East Java, DKI Jakarta and Aceh. In the first quarter, East Java was the province with the highest domestic capital, which was 29,562 billion rupiah, while West Sulawesi was the lowest with an investment of 900 million rupiah. In Quarter 3, Banten was the province with the highest domestic investment, amounting to 12,292 billion rupiah, while Papua was the lowest at 68 billion rupiah.

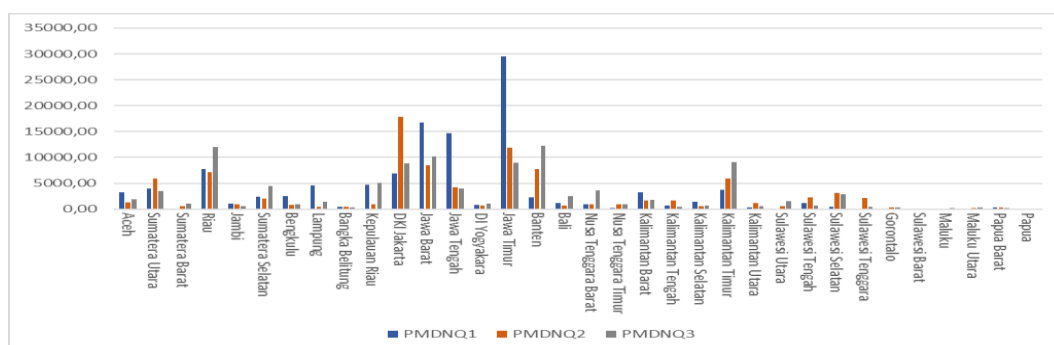


Figure 9. Domestic Investment from First Quarter until Third Quarter of 2020
 Source: Badan Pusat Statistik

3.2. Inferential Analysis

Based on the results of the test, the best model is the Fixed Effect Model with cross-section weight. This modeling is used to analyze the effect of the Covid-19 case, international trade and investment on economic growth in Indonesia from the first quarter to the third quarter of 2020.

Table 1. Output Summary of Model Economic Growth in Indonesia

Variable	Coefficient	t-statistics	Prob.	Decision
Intercept	3.6425	5.7381	0.0000	Reject H ₀
Ln(POSITIF)	-0.9303	-17.4254	0.0000	Reject H ₀
Ln(EKS)	0.0937	0.3618	0.7188	Failed to Reject H ₀
(IMP)	0.2144	1.8048	0.0761	Failed to Reject H ₀
PMDN	0.1561	1.5177	0.1344	Failed to Reject H ₀
Statistics Summary				
R-Squared	0.8824	F-statistics		12.1679
Adjusted R-Squared	0.8099	Prob. Value (F.Statistic)		0.0000

Growth Economic Model

$$EKO_{it} = (3.64^* + \mu_{1i}) - 0.93 \ln(POSITIF_{it})^* + 0.09 \ln(EKS)_{it} + 0.21(IMP_{it}) + 0.16 PMDN_{it} + \varepsilon_{1it}$$

*) significant at level of significance 1 percent

From the result of the F-test, the decision is reject H₀ (prob F.stat < α= 1 percent). Thus, using level of significance of 1 percent, all independent variables simultaneously affect toward growth economy, or in other words, the regression model is feasible.

Based on the partial test, there is only 1 independent variable which has a significant effect on the dependent variable. By using the level of significance 1 percent, In number of positive COVID-19 cases has negative and significant effect toward economic growth. Based on the model, when the number of positive cases increased by 1 percent then the economic growth decreased by 0,0093 percent. This condition happens because Covid-19 pandemic cases caused public consumption to change where people tended not to travel and tended to increase consumption of basic needs. (Damuri, 2020)

From this statement, to increase economic growth can be reached by pressing the number of positive COVID-19 cases. It can be done by applying physical distancing and always using a mask in public places. Besides that, one of the sector that has a positive growth in third quarter of 2020 is chemistry, pharmacy and medicine Industries which mean in this COVID-19 era, businesses can shift or innovate their business to produce products that will be helping for pressing the number of positive COVID-19 cases. In addition, the information and communication sector also has a positive growth in this COVID-19 era. From this condition, to boost and following the flow on pandemic COVID-19 era, businesses need innovate or utilize the online system for surviving their business. It is because of the restriction of meeting, gathering together and so on to surpress the positive COVID-19 cases.

Besides that, In export, import and domestic investment has positive effects but not significant at level significance of one percent. Thus, when the export or import increased it will not significantly affect the economic growth in each province.

In the other hand, the international trade (export and import) variables do not significantly affect the economic growth. This means that, all provinces in Indonesia could not only depend on the foreign products anymore. In this pandemic time, some of other countries blocked the product from Indonesia. Otherwise, Indonesia also could not import the product from trading partner countries, because the trading partner also got the effect of pandemic COVID-19. The solution is Indonesia needs to substitute products of import that are usually purchased with domestic products. In addition, due to weakening international trade, this indicates that each province can empower the trade between regions.

International Trade Model (Export and Import Model)

Table 2. Output Summary of Export Model in Indonesia

Variable	Coefficient	t-statistics	Prob.	Decision
Intercept	1.5506	0.2029	0.0000	Reject H ₀
Ln(Positif)	-0.1099	0.0241	0.0001	Reject H ₀
PMDN	0.0523	0.0157	0.002	Reject H ₀
EKS(-1)	0.0317	0.0696	0.6519	Failed to Reject H ₀
Statistics Summary				
R-Squared	0.9889	F-statistics		76.5033
Adjusted R-Squared	0.9759	Prob. Value (F.Statistic)		0.0000

$$EKS_{it} = (1.55 + \mu_{2i})^* - 0,11 \ln(Positif_{it})^* + 0,05PMDN_{it}^* + 0,03EKS_{i(t-1)} + \varepsilon_{2it}$$

ε_{2it}

*) significant at level of significance 5 percent

The result of the F-test is reject H₀ (prob F.stat < α= 5 percent). Thus, using the level of significance 5 percent, all independent variable simultaneously affect toward growth economy, or in other words, the regression model is feasible. Based on partial test, there are two independent variables which have significant effect on the economic growth that is ln number of positive cases and domestic investment. Using level of significance of 5 percent, ln number of positive COVID-19 cases has negative and significant effect toward economic growth. When the number of positive cases increased by 1 percent then the export value will decreased by 0.0011 billion US \$ or 1.1 million US \$. Domestic Investment has significance effect and positively affect toward export values of each provinces in Indonesia. When the domestic investment increase by 1 percent, the export value will increase by 0.0005 billion US \$ or 0.5 million US \$. On other hand, variable time-lag of export doesn't have significance effect on the export value. It means that the export value on the previous quarter does not effect the export value on this quarter. In this pandemic COVID-19 situation, the export or demand from foreign is not depending on the demand from previous quarter.

Table 3. Output Summary of Import Model in Indonesia

Variable	Coefficient	t-statistics	Prob.	Decision
Intercept	1.1637	8.3750	0.0000	Reject H ₀
Ln(POSITIF)	-0.1294	-5.0723	0.0000	Reject H ₀
PMDN	0.1654	4.0582	0.0003	Reject H ₀
IMP(-1)	0.0705	2.4087	0.0221	Reject H ₀
Statistics Summary				
R-Squared	0.9723	F-statistics		30.2507
Adjusted R-Squared	0.9402	Prob. Value (F.Statistic)		0.0000

$$Impor_{it} = (1.16 + \mu_{3i})^* - 0.13 \ln(POSITIF_{it})^* + 0.16 PMDN_{it}^* + 0,07IMP_{i(t-1)}^* + \varepsilon_{3it}$$

*) significant at level of significance 5 percent

For the import model, the result of F-test is reject H₀ (prob F.stat < α= 5 percent). Thus, using the level of significance 5%, all independent variables simultaneously affect toward growth economy. The regression model of import is also feasible. Based on partial test, there are three independent variables which have significant effect on the economic growth that is ln number of positives cases, domestic investment, and value of import in the previous quarter. By using level of significance 5 percent, ln number of positive COVID-19 cases has negative and significant effect toward import value. It means that when the number of positive cases increased by 1 percent then the import value will decreased by 0.0013 billion US \$ or 1.3 million US \$. Domestic investment has significant effect but positively affect toward import values of each provinces in Indonesia.

When the domestic investment increase by 1 percent, the domestic investment will increase by 0.0016 billion US \$ or 1.6 million US \$. The variable time-lag of import also have significant effect on the import value. It means that the import value on the previous quarter affect the import value on this quarter.

4. CONCLUSIONS

Based on result and discussion, the conclusion are: (1) Ln number of positive COVID-19 cases has negative and significant effect on economic growth of each provinces in Indonesia. Meanwhile, ln export, import and domestic investment is do not significantly affect the economic growth in each provinces in Indonesia; (2) Ln number of positives cases has negative and significant effect on export and also import. Meanwhile, domestic investment has positive and significant effect on export and also import. in the previous quarter has significant effect on import. The time-lag on the export doesn't have significant effect on export while the time-lag on the import have significant effect on import in this Covid-19 pandemic.

Based on conclusion as mentioned, there are some suggestions that can be conveyed: (1) Suppressing the Covid-19 cases in Indonesia is a top priority so that the Indonesian economy can recover. All activities are carried out by implementing health protocols. It is recommended for all Indonesians to implement health protocols; (2) Businesses actors can innovate to produce products that can reduce positive cases of Covid-19 in Indonesia, such as using the internet for marketing the products, encouraging domestic mask or APD production to enhance suppressing the positive cases, utilizing technology to run their businesses, and so on; (3) Indonesian people must start to be independent and not depend on foreign countries. Domestic people's consumption must be increased, which can be done by providing social assistance funds. Indonesian people also need to buy more domestic goods to drive the Indonesian economy; (4) Each province can empower the trade between regions in Indonesia.

5. REFERENCES

- Alikhanli, Y. (2020). Some Scenarios on the impacts of the COVID-19 pandemic to automobile import demand function in Azerbaijan. *Journal of Physics: Conference Series*, 1564(1), 12-26.
- Baltagi, B. H. (2005). *Econometric Analysis of Panel Data 3rd Edition*. John & Sons.
- Damuri, Y. R., & Hirawan, F. B. (2020). Mengukur Dampak COVID-19 pada Pertumbuhan Ekonomi dan Perdagangan Indonesia 2020. *CSIS Commentaries DMRU-015*.
- Firdaus, R.G. (2020). Pengaruh Risiko, Return, dan Perekonomian Indonesia Terhadap Keputusan Berinvestasi Saat Covid-19. *Jurnal Pasar Modal dan Bisnis*, 2(2), 115-128.
- Greene, W. H. (2012). *Econometric Analysis 7th Edition*. Boston: Prentice Hall.
- Gujarati, D. N. & Porter, D. C. (2008). *Basic Econometrics 5th Edition*. Douglas Reiner.
- Mehta, K. & Jha, S. S. (2020). COVID-19: A nightmare for the Indian Economy. *UGC Care Journal*, 31(20).
- Nasution, D. A. D., Erlina, E., & Muda, I. (2020). Dampak pandemi Covid-19 terhadap perekonomian Indonesia. *Jurnal Benefita: Ekonomi Pembangunan, Manajemen Bisnis & Akuntansi*, 5(2), 212-224.
- Susilawati, S., Falefi, R., & Purwoko, A. (2020). Impact of COVID-19's Pandemic on the Economy of Indonesia. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 3(2), 1147-1156.
- Wuryandani, D. (2020). Dampak Pandemi Covid-19 Terhadap Pertumbuhan Ekonomi Indonesia 2020 dan Solusinya. *Info Singkat*, XII(15), 19-24.