THE INFLUENCE OF FOREIGN DIRECT INVESTMENT (FDI), EXTERNAL DEBT, AND TRADE OPENNESS (TO) ON ECONOMIC GROWTH IN EMERGING MARKET COUNTRIES WITH THE COVID-19 PANDEMIC AS A DUMMY VARIABLE

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Abstract

One global goal to achieve is decent work and economic growth. Economic growth from one period to another reflects the achievement of a country's economic development. The factors of production owned by a country are used to produce goods and services, which will then determine the country's competency in economic growth within a certain time. This study aims to determine the effect of foreign direct investment (FDI), external debt, and trade openness (TO) on economic growth in emerging market countries with the Covid-19 pandemic as a dummy variable. The analysis technique in this study uses the least squares method, or Ordinary Least Square (OLS), for the dummy variable multiple linear regression model. The results of this study indicate that foreign direct investment (FDI), external debt, trade openness, and the Covid-19 pandemic simultaneously (together) affect economic growth. Foreign direct investment (FDI) and trade openness positively affect economic growth in emerging market countries. It is shown from the regression coefficient values that are equal to 2.044 and 5.248. Meanwhile, external debt and the Covid-19 pandemic had a negative (opposite) effect on the economic growth of emerging market countries. It is shown from the results of the regression coefficients, which are -0.007 and -2.018.

Kata Kunci: Foreign direct investment, external debt, trade openness, COVID-19 pandemic, economic growth.

INTRODUCTION

Countries members of the United Nations (UN) have formulated Sustainable Development Goals (SDGs) as the 2030 agenda for peace and prosperity for humans and the planet for future generations (United Nations, 2015). Raising awareness about ending poverty and improving other living conditions must go hand-in-hand with strategies to improve health and education, reduce inequalities, and promote economic growth while tackling climate change and leading to ocean and forest conservation (Eisenmenger et al., 2020). One global goal to achieve is decent work and economic growth. According to Eisenmenger et al. (2020), this goal leads to inclusive and sustainable economic growth, increased productivity, and technological innovation.

The achievement of a country's economic development can be seen from the economic growth from one period to another. In a period, a country's capacity to produce goods and services will increase at the expense of production factors which always increase in quantity and quality (Gafur & Rochaida, 2022). The factors of production owned by a country are used to produce goods and services, which will then determine the country's competency in economic growth within a certain time. It is in line with the study of Indayani & Hartono (2020) that the income of a country where the cumulative growth or national output increases over a certain period is called economic growth. This economic growth refers to an increase in the physical production capacity of goods and services over a certain time. This can be seen in the increase in the production of industrial goods, the increase in the number of schools, the
development of infrastructure, the increase in the service sector, and the increase in the production of capital goods. Each country will try its best to support and increase its country's economic growth optimally. In increasing production capacity, a country needs to increase the number and quality of production factors.

Based on a study by Nainggolan (2021) and Gafur & Rochaida (2022), relatively high economic growth will strongly impact the poverty rate. Economic growth will result in a lot of goods and services being produced in the region, which will absorb labor. It will result in a higher per capita income which will reduce an area's poverty level. Higher per capita income will make it easier for people to meet their daily needs, especially basic needs. According to Zhu (2022) and Dikko Alrakhman et al. (2022), high economic growth has helped reduce unemployment. The decrease in the unemployment rate creates more opportunities for people to earn a living for their family life.

At the end of 2019, a deadly virus that attacked human health originated in Wuhan, China. This virus has even claimed millions of lives to date. The emergence of the virus spread to all parts of the world and became a global crisis. This condition is a pandemic WHO (World Health Organization). This pandemic is a big challenge for the entire world economy, including for emerging market countries. Based on Wang & Huang (2021) (2021), the Covid-19 pandemic poses a significant challenge to the sustainable development of developing countries compared to developed countries. In their study, Wang and Huang stated that the Covid-19 pandemic hurt 17 SDGs, while a pandemic could also bring opportunities to the other 14 SDGs goals.

A study by Vidya & Prabheesh (2020) shows a drastic decline in trade relations, connectivity, and density between countries after the Covid-19 outbreak. There have been changes in the trade network structure and a significant trade reduction between countries due to the adverse effects of the Covid-19 pandemic. Topcu & Gulal (2020) stated that the negative impact of Covid-19 on emerging market countries gradually decreased and began to decrease in mid-April 2020. The negative impact received by emerging market countries was smaller because the government was timely in taking the necessary policies and announcing the package. Bigger stimulus.

According to Abbass et al. (2022), the Covid-19 pandemic has affected aggregate demand and production levels of manufacturing and related industries. Covid-19 has created a scenario where the supply and demand for goods and services have temporarily stopped. Covid-19 has triggered a decline in demand and brought the world on the verge of an economic recession. This pandemic has created a sense of pessimism in the community due to concerns about this case resulting in decreased consumption and people choosing to add to their savings. Meanwhile, due to the closure of all industries for a certain time, productivity in the long term will remain the same. In addition, low demand results in low investment, then there will be a decrease in production and collective needs. This cycle will occur continuously.

Economic growth can be influenced by several factors and can be viewed from government expenditure. According to Mangkoesoebroto and Algifari (1998), quoted from Hikmah & Sugiharti (2022), calculate the Gross Domestic Product (GDP) through the expenditure side, and it is divided into four parts, namely household consumption, government spending, investment, and net exports (export-import). One of the factors that influence economic growth is the foreign direct investment (FDI).

Emerging market countries are considered attractive and potential targets for investors to invest in the country. According to Dunning's eclectic paradigm, foreign investment influences national economic productivity. Foreign investment will transfer technology, management, and expertise from the investing country, resulting in an increase in output. An increase in productivity certainly means economic growth. High economic growth will also attract investors to invest in a country (Safitriani, 2014).
Several studies have proven that foreign direct investment is one of the factors affecting economic growth. Based on the study by Musah et al. (2018), Lasbrey et al. (2018), Dahri et al. (2021), Ali et al. (2021), Sajjad et al. (2018), and Yang & Shafiq (2020), foreign direct investment (FDI) has a positive influence on the economic growth of recipient countries. The foreign direct investment provides the capital and financial investment required by the industry. The inflow of FDI can increase competition in various business sectors in the host country and help local companies become more efficient and productive by adopting modern technology. Foreign direct investment affects the absorption of the host country's workforce, the availability of quality human resources and physical capital, as well as the economic freedom of the host country.

Government expenditure in the form of debt payments also affects economic growth. The Ricardian Equivalence theory explains that in financing the government's budget deficit, external debt policy does not affect economic growth (Rachmadi, 2013). External debt will increase the government's burden in the future. If a country has higher external debt than its capacity to pay and there are debt arrears, this is called a debt overhang. The government will be forced to impose high taxes on private companies to compensate for the underpayment under the contract. This tax will reduce incentives to save, invest, and engage in productive activities. Thus, the potential funds that might be invested are used to pay off debt.

Based on a study by Odubusi et al. (2018) and Tuncer Gövdeli (2019), external debt can increase GDP in the short and long term. External debt and GDP have a symbiotic relationship in infrastructure development. However, it cannot say that external debt will always increase economic growth. According to the debt overhang hypothesis, when the external debt increases, debt repayments eventually become unsustainable, and the country will face a crisis once a certain threshold is reached (Makun, 2021). With a shrinking economy, the country becomes unable to use its resources and may find itself in a stalemate. According to a study by Sajjad et al. (2018), Onafowora & Owoye (2019), Mumba & Li (2020), and Ali dkk (2021), external debt has an adverse and statistically significant impact on the GDP growth rate. If the external debt is not utilized and managed properly, it will burden the entire world economy. The detrimental effect of debt on the economy is caused by the fact that the state has to pay interest on debt and cannot set financial policies. The state must comply with the lender's policy and cannot use borrowed funds at the state's discretion.

On the expenditure side, gross domestic product (GDP) can be seen from exports and imports (net exports). According to Wibowo (2018), exports and imports are a form of trade openness. Based on the theory of mercantilism, the greater the export surplus a country gets, the stronger that country is. Trade openness can contribute to real economic growth in a more efficient allocation of scarce resources, the effect of absorbing technology from developed to developing countries, the effect of learning while working, and the effect of providing more conventional foreign exchange (Çevik et al., 2019). The link between trade openness and economic growth is not new. Based on a study by Çevik et al. (2019), Raghutla (2020), and Kong et al. (2021), trade openness has a significant positive impact on economic growth.

According to a study by Kong et al. (2021), there is a stable cointegration relationship between trade openness and the quality of economic growth in the long run. Trade openness (TO) is positive and statistically significant in the short term. In the long and short term, Trade Openness can significantly boost the quality of economic growth. When short-term fluctuations deviate from long-term equilibrium, the quality of economic growth can remain stable through automatic adjustments. According to Çevik et al. (2019), increased openness can lead to increased productivity and efficiency in the medium term.

**METHOD**
This study uses secondary data types with a quantitative approach. The analysis technique in this study uses the least squares method, or Ordinary Least Square (OLS), for the dummy variable multiple linear regression model. This study has one variable defined as the object of study, namely Economic Growth (Y). Furthermore, the independent variables in this study consist of Foreign Direct Investment (X₁), External debt (X₂), and Trade Openness (X₃). In this study, the authors used a dummy variable to distinguish variables during the Covid-19 pandemic and before the pandemic. The variable will have a value of 0 before the COVID-19 pandemic occurred in the 2016-2019 period and a value of 1 when the COVID-19 pandemic occurred in 2020-2021.

RESULT AND DISCUSSION
Multicollinearity Test

<table>
<thead>
<tr>
<th>Table 1.1 Multicollinearity Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficients¹</td>
</tr>
<tr>
<td>Model</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>I</td>
</tr>
<tr>
<td>FDI</td>
</tr>
<tr>
<td>ULN</td>
</tr>
<tr>
<td>TG</td>
</tr>
<tr>
<td>COV</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

¹ Dependent Variable: FE

Based on the results of the multicollinearity test above, the value of the centered VIF foreign direct investment is 1.076; the value of the centered VIF external debt is 1.075; the value-centered VIF trade openness is 1.012; and the value-centered VIF pandemic covid-19 (dummy variable) is 1.022. So that all independent variables in the regression equation have a value-centered VIF < 10. Thus, the regression model avoids multicollinearity problems.

Heteroscedasticity Test

Based on the scatter plot results above, it is known that the scatter plot does not show a particular pattern. The scattering of the data spread so that it was concluded that there was no heteroscedasticity problem. Thus it can conclude that the data is homoscedastic.

Hypothesis Test
1. Partial Significance Test (T-Test)
Tabel 1. 2 T Test Result

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Std Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>3.058</td>
<td>0.044</td>
<td>69.080</td>
</tr>
<tr>
<td>FDI</td>
<td>24.044E-5</td>
<td>0.000</td>
<td>402</td>
</tr>
<tr>
<td>ULN</td>
<td>-0.007</td>
<td>0.001</td>
<td>-1.76</td>
</tr>
<tr>
<td>TO</td>
<td>5.248E-15</td>
<td>0.000</td>
<td>0.033</td>
</tr>
<tr>
<td>COV</td>
<td>-2.018</td>
<td>0.041</td>
<td>-0.798</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PE

Based on the results of the t-statistical test, it can see the direction of the beta regression coefficient and its significance. Partial test results can be seen:

a. Foreign Direct Investment (FDI) has a calculated t value of 24.224 > 1.97361 and a significance value of 0.000 ≤ 0.05, and it has a significant effect
b. External debt has a calculated t value of 10.597 > 1.97361 and a significance value of 0.000 ≤ 0.05, so it has a significant effect.

c. Trade openness has a calculated t value of 2.043 > 1.97361 and a significance value of 0.043 ≤ 0.05, which has a significant effect.

d. The Covid-19 pandemic has a t value of 49.314 > 1.97361 and a significance value of 0.000 ≤ 0.05, so it does not have a significant effect.

2. Simultaneous Significance Test (F Test)

Tabel 1. 3 F Test Result

<table>
<thead>
<tr>
<th>ANOVAa</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>165.803</td>
<td>4</td>
<td>41.401</td>
<td>947.336</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>5.026</td>
<td>115</td>
<td>.044</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>170.829</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: PE

b. Predictors: (Constant), COV, TO, ULN, FDI

Based on the results of statistical tests, the value of F_{count} = 947.336 > 1.97361 means that foreign direct investment (FDI), external debt, trade openness, and the Covid-19 pandemic simultaneously (together) affect economic growth.

3. Determination Coefficient Test (R^2)

Table 1. 4 Determination Coefficient Test Result

<table>
<thead>
<tr>
<th>Model Summaryb</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0.985a</td>
<td>.971</td>
<td>0.970</td>
<td>20085</td>
<td>2.156</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), COV, TO, ULN, FDI

b. Dependent Variable: PE

Based on the table, the value of R^2 = 0.971 means that changes in economic growth can be explained by changes in foreign direct investment (FDI), external debt, trade openness, and the Covid-19 pandemic of 97.1%.

Multiple Linear Regression Models
Table 1. 5 Multiple Linear Regression Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.058</td>
<td>0.44</td>
<td>69.080</td>
<td>0.000</td>
</tr>
<tr>
<td>FDI</td>
<td>2.044E-4</td>
<td>0.001</td>
<td>0.402</td>
<td>24.224</td>
<td>0.000</td>
</tr>
<tr>
<td>ULN</td>
<td>-0.007</td>
<td>0.011</td>
<td>-0.176</td>
<td>-10.597</td>
<td>0.000</td>
</tr>
<tr>
<td>TO</td>
<td>5.248E+16</td>
<td>0.000</td>
<td>0.033</td>
<td>2.043</td>
<td>0.043</td>
</tr>
<tr>
<td>CDV</td>
<td>-2.018</td>
<td>0.041</td>
<td>-0.758</td>
<td>-43.314</td>
<td>0.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: FDI

Based on the table above, the multiple linear regression model used in this study is as follows:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu \]

\[ Y = (3.058) + 2.044 X_1 - 0.007 X_2 + 5.248 X_3 - 2.018 X_4 + \mu \]

From the results of multiple linear regression, it can be explained as follows:

a. The constant value (\(\alpha\)) has a positive value of 3.058. The positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable. It shows that if all the independent variables, which include foreign direct investment (\(X_1\)), external debt (\(X_2\)), trade openness (\(X_3\)), and the dummy variable: the covid-19 pandemic (\(X_4\)), are 0 percent or do not change, then the value of economic growth is 3.058.

b. The regression coefficient value for the foreign direct investment variable (\(X_1\)) is 2.044. This value indicates a positive influence between foreign direct investment (FDI) variables and economic growth. If the foreign direct investment (FDI) variable increases by 1%, the economic growth variable will increase by 2.044. Assuming that other variables remain constant.

c. The regression coefficient value for the external debt variable (\(X_2\)) is -0.007. This value shows a negative effect (opposite direction) between external debt variables and economic growth. It means that if the external debt variable increases by 1%, then on the contrary, the growth variable will decrease by 0.007. Assuming that other variables remain constant.

d. The regression coefficient value for the trade openness variable (\(X_3\)) is 5.248. This value indicates a positive influence between trade openness and economic growth. It means that if the trade openness variable increases by 1%, the economic growth variable will increase by 5.248. Assuming that other variables remain constant.

e. The regression coefficient value for the Covid-19 pandemic (\(X_4\)) is -2.018. This value shows a negative effect (opposite direction) between the Covid-19 pandemic and economic growth. It means that if the Covid-19 pandemic variable increases by 1%, then on the contrary, the economic growth variable will decrease by 2.018. Assuming that other variables remain constant.

The Influence of FDI on Economic Growth

The regression test results in this study indicate that foreign direct investment (FDI) has a positive effect on economic growth. It means that when foreign direct investment (FDI) increases, economic growth in a country also increases. This study's regression coefficient value for the foreign direct investment variable was 2.044. If the FDI variable increases by 1%, the economic growth variable will increase by 2.044. Assuming that other variables remain constant. A similar study was also conducted by Musah et al. (2018), Sajjad et al. (2018), and Dahri et al. (2021), which says that foreign direct investment (FDI) has a positive effect on economic growth.
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The eclectic dunning paradigm also supports the results of this study. According to the eclectic dunning paradigm, foreign investment influences national economic productivity. Transfer of technology, management, and expertise from the investing country will occur with the presence of foreign investment, which will increase output. This increase in productivity certainly means economic growth in the country.

This study examines economic growth and FDI in emerging market countries, where quickening rates of economic expansion, industrialization, and modernization are being witnessed throughout this nation. When determining the flow of foreign direct investment (FDI), developed nations prioritize government accountability, the availability of skills and infrastructure, and differences in production costs. In emerging market countries, FDI flows rely on income levels, economic and political stability, market size, labor skills, and the availability of infrastructure and other resources, which impact production specialization to become efficient.

The Influence of External Debt on Economic Growth

The regression test results in this study indicate that external debt has a negative (opposite) effect on economic growth. It means that an increase in external debt will result in a decrease in economic growth in a country. In the study, the coefficient value of the external debt variable is -0.007. It means that if the external debt variable increases by 1%, then on the contrary, the growth variable will decrease by 0.007. Assuming that other variables remain constant. A similar study was also conducted by Sajjad et al. (2018), Omodero & Alpheaus (2019), Sadiq & Gill (2021), and Mumba & Li (2020), which state that external debt has a negative and statistically significant impact on the level of economic growth.

The results of this study are also supported by the Ricardian Equivalence Hypothesis (REH) regarding the impact of government debt on the economy. External debt will increase the government's burden in the future. The taxes paid will continue to increase so that the debt and taxes that must be borne by the government will be even greater. In addition, there is a debt overhang theory which explains conditions in which a country has accumulated debt problems and is unable to fulfill its obligations in the future.

This study examines economic growth and external debt in emerging market countries. External debt is worrying because there is a possibility that a country will experience a debt overhang that demands the government to increase taxes. This tax will reduce incentives to save, invest, and engage in productive activities. Thus, the potential funds that might be invested are used to pay off debt.

The Effect of Trade Openness on Economic Growth

The regression test results in this study indicate that trade openness has a positive effect on economic growth. It means that when trade openness increases, economic growth in a country also increases. In this study, the regression coefficient value for the trade openness variable was 5.248. It means that if the trade openness variable increases by 1%, the economic growth variable will increase by 5.248. Assuming that other variables remain constant. A similar study was also conducted by Raghutla (2020), Kong et al. (2021), Oloyede et al. (2021), Astuti & Ayuningtyas (2018), Banday et al. (2021), and Dahri et al. (2021) which says that trade openness has a positive effect on economic growth.

The results of this study are also supported by the theory of mercantilism, which explains that international trade aims to maximize trade surpluses so that countries receive large incomes. Trade openness can significantly boost the quality of economic growth in both the long and short term. When short-term fluctuations deviate from the long-term balance, the quality of economic growth can remain stable through automatic adjustment. The positive
impact of trade openness on the quality of economic growth has regional heterogeneity characteristics and significant nonlinear thresholds.

This study examines economic growth and trade openness in emerging market countries. Trade openness marked by exports and imports will increase economic growth because of the benefits gained. Where these profits come from the export surplus of international trade carried out.

**The Effect of the Covid-19 Pandemic on Economic Growth**

The regression test results in this study show that the Covid-19 pandemic harms economic growth. It means that the Covid-19 pandemic resulted in a decrease in economic growth. The study's regression coefficient value for the Covid-19 pandemic variable was -2.018. It means that if the Covid-19 pandemic variable increases by 1%, then on the contrary, the economic growth variable will decrease by 2.018. Assuming that other variables remain constant. A similar study was also conducted by Nasution et al. (2020), Asare Vitenu-Sackey & Barfi (2021), and Abbass et al. (2022), which stated that the Covid-19 pandemic hurt economic growth.

Based on Keynesian theory, aggregate demand (AD) determines the level of employment and output. Faster productivity growth will grow future incomes and drive the production of goods and services. Positive, productive growth will determine AD by deploying current resources for investment. Aggregate demand consists of government purchases, investment, consumption, and net exports. According to Keynesian theory, AD shock during the Covid-19 pandemic will cause an economic recession.

The Covid-19 pandemic has affected aggregate demand and related industrial production levels. Covid-19 has created a scenario where the supply and demand for goods and services have temporarily stopped. Covid-19 has triggered a decline in demand and brought the world on the verge of an economic recession. The pandemic situation has raised concerns resulting in a decline in consumption and people have chosen to add to their savings. Meanwhile, due to the closure of all industries for a certain time, productivity will decrease in the long term. In addition, low demand results in low investment, then there will be a decrease in production and collective needs. This cycle will occur continuously.

**CONCLUSION**

Based on the data processing that has been done, it can be concluded that there is a joint or simultaneous effect of foreign direct investment (FDI), external debt, trade openness, and the Covid-19 pandemic on the economic growth of emerging market countries. The results of hypothesis testing lead to the conclusion that:

1. Foreign direct investment (FDI) positively affects economic growth in emerging market countries. It means that if the foreign direct investment (FDI) variable increases by 1%, then the economic growth variable will increase by 2.044.

2. External debt has a negative (opposite direction) effect on economic growth in emerging market countries. It means that if the foreign debt variable increases by 1%, then on the contrary, the growth variable will decrease by 0.007.

3. Trade openness has a positive effect on economic growth in emerging market countries. It means that if the trade openness variable increases by 1%, the economic growth variable will increase by 5.248.

4. The Covid-19 pandemic has had a negative (opposite) effect on the economic growth of emerging market countries. If the Covid-19 pandemic variable increases by 1%, then the economic growth variable will decrease by 2.018.
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Vol. 7(2, November).