Analysis of inclusive growth in ASEAN countries

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ARTICLE INFO

<table>
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<tr>
<td>Received : 2023-06-15</td>
</tr>
<tr>
<td>Revised : 2023-08-08</td>
</tr>
<tr>
<td>Accepted : 2023-09-30</td>
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ABSTRACT

There are 17 goals to achieve sustainable development in Sustainable Development Goals (SDGs) adopted by the United Nations. One of SDG that promote inclusive and sustainable economic growth is SDG number 8. Sustainable economic growth seeks to achieve goals that support the process of economic development. Inclusive growth is sought to support the process of economic growth and economic development to prevent future generations from suffering depletion of resources. The effort to achieve inclusive growth in line with the Sustainable Development Goals (SDGs). ASEAN was formed as an integration of any counties as a result of globalization,. The integrated economies of ASEAN countries form economic liberalization, giving rise to economic openness. The manifestation of economic openness is trade openness and financial openness. The panel regression method is used to see the effect of economic openness and macroeconomic variables on economic growth as a proxy for inclusive growth. The results found that inflation and unemployment as macroeconomic variables had a significant negative effect on economic growth. It means to achieve the inclusive growth; the ASEAN countries should keep the inflation stable and low unemployment rate.

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Introduction

There are 17 goals to achieve sustainable development in Sustainable Development Goals (SDGs) adopted by the United Nations. One of SDG that promote inclusive and sustainable economic growth is SDG number 8. Sustainable economic growth seeks to achieve goals that support the process of economic development. Sustainable economic growth showed the continuity without fluctuations in the rate of economic growth so that future generations do not suffer from depletion of resources (Armeanu et al., 2018). To achieve the country's economic growth that support inclusive growth and follows SDGs 8 goals is to guarantee employment opportunities and decent work (Pratiwi et al., 2023). Inclusive growth seeks to be achieved by every country with the hope that growth will not only be felt by some people (exclusively) but also all parties equally. Inclusive growth as growth in the economy that creates opportunities and ensures equitable distribution of
Inclusive growth in this study is proxied by economic growth because economic growth can reflect the economic condition of a country and assess economic performance. Mankiw (2009) stated that economic growth shows the extent to which economic activity will generate additional income for the community in a certain period. Economic growth also defined as a process in a country that create better conditions for a country (Lucas & Landman, 2021). The indicator used to measure economic growth is the growth rate of Gross Domestic Product (GDP) because GDP is the added value generated from all production activities in the economy. Economic growth is enhanced by higher incomes as reflected by Gross Domestic Product which transfers per capita income and increases living standards and savings (Ioan, Mozi, et al., 2020). Previous study has explained about sustainable and inclusive economic growth with a varied focus on various global topics. Díaz et al (2019) stated that sustainable economic growth requires that economic growth must be in accordance with the socio-economic and environmental goals needed for long-term development. Onabote et al (2021) explained that sustainable energy and energy financing, which are important issues for a country, have a significant relationship with a country's economic growth. Afriyana et al (2023) revealed that infrastructure development in a country can support the realization of inclusive economic growth.

As we know, it cannot be denied that economic growth is crucial because it will become something that will continue to receive significant attention for a country (Abad-Segura & González-Zamar, 2021). Studies related to economic growth will continue to be discussed, especially to support the achievement of the SDGs. So the challenge of this research is have to review more of the literature, create a novelty, and contribute to the development of knowledge related to inclusive growth. This study attempts to use economic openness to find out how inclusive growth can be achieved because currently we live in globalization's era that require resilience in global competition. Global competition in various fields has influenced the development of the world economy. Each country is required to be more open in conducting international trade by carrying out forms of economic cooperation starting from the regional to the international level (Wau et al., 2022). The globalization era provides opportunities for openness between countries to become wider so it brings integration or cooperation with the aim of mutually benefiting various parties. One form of integration or cooperation is the emergence of ASEAN (Malik et al., 2020). This study chose ASEAN because it is an emerging market country. At present, the ASEAN region is considered to be the center of the most dynamic economic region in the world because the emerging trends in their economy can attract economists and policymakers around the world. In fact, according to a McKinsey Global Institute (MGI) report, the ASEAN economy is among the developing countries that outperform the world economy with positive long-term growth prospects (Nasir et al., 2019).
The integrated economies of ASEAN countries form economic liberalization, giving rise to economic openness. According to modern economic growth theory, economic openness is believed to encourage a country's economic growth (Purnomo & Mudakir, 2020). Several studies also show that economic openness has an influence on economic growth (Adepoju & Ogundunmade, 2019; Asamoah et al., 2019; Suhendra, 2020). The existence of economic openness is expected to be able to realize inclusive growth, instead of hampering the rate of economic growth. The manifestation of economic openness is trade openness and financial openness. Trade openness has an important role for economic openness in promoting rapid growth and sustainable social progress (Pertiwi et al., 2020). Trade openness is the ratio of trade transactions from within the country to abroad and vice versa to the Gross Domestic Product so it is often used as an indicator of international transactions from the existence of free trade (Puspasari & Gazali, 2022). Free trade in a free market is a concept in an economy that is oriented towards the sale of products across national borders or commonly called international trade but not through export and import taxes and other trade barriers (Azzahra et al., 2022). A study conducted by Taiwo & Olalekan (2021) shows that trade openness has a positive effect on economic growth. This means that the higher the ratio of trade openness will increase economic growth. Conversely, trade openness can negatively affect economic growth because developing countries are still not well prepared to face global competition (Ichvani & Sasana, 2019). While financial openness is needed to support more efficient financial transactions, as a source of development financing, facilitating international trade, supporting the development of the financial sector, and ultimately increasing economic growth (Purnomo & Mudakir, 2020). Yuan & Wu (2021) uses the Foreign Direct Investment (FDI) variable for financial openness because financial openness means increasing the possibility of accessing international financial markets that can fund domestic investment projects, thereby contributing to economic growth.

Mechanisms of the banking system and the central bank participate in supporting economic growth. The financial and banking sectors play an important role in reducing CO₂ emissions by promoting green investment in order to achieve sustainable economic growth. When credit rates are increased for green investments it can make the money supply rise, which in turn causes inflation (Ioan, Rathnaswamy, et al., 2020). Inflation is a macro variable that also has an influence on economic growth. Inflation is a condition of increasing prices in general in the economy continuously in a certain period of time. The inflation rate is a change in the price level (Blanchard, 2004). The causes of inflation using the real market or goods market approach are divided into two, namely those caused by demand pull inflation and cost push inflation. There are several studies that explain the relationship between the inflation rate and economic growth. Tahir & Azid (2015) states that a low inflation rate in a country indicates a stable economic environment so that it has a
positive impact on economic growth, but if the inflation rate fluctuates, it will make it difficult or slow down the increase in a country’s economic growth. If inflation increases, it will have a negative impact on economic growth because the high inflation rate encourages interest rates to rise resulting in speculative investment that has an impact on development implementation failures, economic instability, balance of payments deficits, and reduces people’s welfare (Asnawi & Fitria, 2018).

Apart from inflation, another macroeconomic variable related to economic growth is unemployment. High economic growth has not been proportional if the developing sector has not been able to absorb labor or has not been able to significantly reduce the unemployment rate (Soekapdjo & Esther, 2019). Unemployment is one of the problems for a country that is not easy to handle considering that the population growth rate is not proportional to the growth rate of job availability. Mankiw (2009) stated that the unemployed category includes people who are not working, available for work, have tried to find work during the previous four weeks, as well as including people waiting to be called back to jobs where they have been laid off. The theory that explains the relationship between unemployment and economic growth is Okun’s Law. Okun’s law states that there is an empirical effect between unemployment and output in the business cycle, where the addition of unemployment will reduce Gross Domestic Product, which means that there is a negative effect between unemployment and economic growth. High unemployment rates can hinder economic growth. Several studies state that high unemployment rates have a negative effect on economic growth (Ronaldo, 2019; Utami, 2020; Marliana, 2022). The increasing economic growth without environmental preservation and not inclusive will actually keep people away from what they want to achieve because it creates other problems that are more complex and more dangerous (Arafah et al., 2018). Therefore, this study aims to analyze the factors that can encourage the inclusive growth in ASEAN by using the variables of trade openness and financial openness considering that ASEAN countries have similar economic characteristics and common trade interests. Trade openness is represented by the ratio of openness, namely the amount of exports and imports compared to the value of GDP. Foreign Direct Investment (FDI) is used the indicator of financial openness. In addition, the macro variables those are inflation and unemployment.

**Method**

This research is quantitative and the data source used is secondary data from the World Bank website for GDP, inflation, and unemployment. In addition, the data on trade openness and economic openness gains from the website of United Nations Conference on Trade and Development (UNCTAD). The research objects are ASEAN countries consisting of Indonesia, Singapore, Malaysia, the Philippines, Thailand, Vietnam, Brunei, Myanmar, Laos and Cambodia. The
Analysis in this research uses panel data regression because it consists of a combination of time series and cross section data. The research time period is from 2010 – 2021. The dependent variable in this study is economic growth as measured by Gross Domestic Product or Gross Domestic Product. Independent variables for analyzing economic growth use trade openness, financial openness, and macroeconomic variables. In this study, the measurement of trade openness is represented by the openness ratio, namely net exports plus net imports compared to the value of GDP in percentage form which refers to research by Puspasari & Gazali (2022). Meanwhile, financial openness indicator is using Foreign Direct Investment (percentage of GDP). In addition, it also adds macroeconomic variables, namely inflation as measured by the Consumer Price Index and unemployment as measured by the unemployment rate.

The data analysis technique used is panel regression analysis. In general, there are three panel data regression models, namely Common Effect, Fixed Effect, and Random Effect. Determination of the best model in the three models above is carried out through three tests, namely the Chow test, Hausman test, and LM test. The Chow test is used to determine the appropriate model between the Common Effect (CE) model and the Fixed Effect (FE) model. The Hausman test is used to determine the best model between the Random Effect (RE) model and the Fixed Effect (FE) model. The LM test is used to determine which model is more suitable between the Common Effect (CE) model and the Random Effect (RE) model. The regression equation model in this study is as follows:

\[ Y_{it} = \beta_0 + \beta_1 T_{O_{it}} + \beta_2 F_{DI_{it}} + \beta_3 I_{NF_{it}} + \beta_4 U_{NE_{M_{it}}} + \varepsilon_{it} \]  

Where \( Y \) is the economic growth as proxy for inclusive growth; \( T_{O} \) is the trade openness; \( F_{DI} \) is the foreign direct investment; \( I_{NF} \) is the inflation; \( U_{NE_{M}} \) is the unemployment rate; \( \beta_0 \) is the constant; \( \beta_1, \beta_2, \beta_3, \beta_4 \) is the coefficient regression and \( \varepsilon_{i} \) error term.

**Results and Discussion**

The results of the panel regression analysis to analyze economic growth in ASEAN show that not all independent variables have a significant effect on economic growth. After conducting a regression analysis of the common effect, fixed effect, and random effect models, the best model selection test was carried out using the Chow and Hausman tests. Table 1, the Chi-square cross-section prob value is 0.0000. The Chi-square cross-section prob value is less than the 5% significance level (\( \alpha = 0.05 \)). Seeing these results, it can be concluded that the correct model used in this study is the Fixed Effect Model (FEM). The next step is to find out the most appropriate model in this study, it is necessary to test the Fixed Effect Model (FEM) and the Random Effect Model (REM) using the Hausman Test. The Hausman test results show that the random cross-section probability value is 0.0041. The random cross-section prob value is less than the 5% significance level (\( \alpha = 0.05 \)). Thus, the appropriate model used in this study is the Fixed Effect Model (FEM). The
LM test was not carried out considering the results of the Chow and Hausman tests showing the Fixed Effect Model as the best model. Thus it can be concluded that the model chosen in this study is the Fixed Effect Model.

Table 1. Result of Model Selection in Panel Data

<table>
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<tr>
<th>Model Selection Test</th>
<th>Effect Test</th>
<th>Prob.</th>
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<tr>
<td>Chow Test</td>
<td>Cross-section Chi-Square</td>
<td>0.0000</td>
</tr>
<tr>
<td>Hausman Test</td>
<td>Cross-section Random</td>
<td>0.0041</td>
</tr>
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</table>

Source: data processed

Table 2 showed that inflation variable has a significant negative effect on economic growth because of the prob value = 0.0000 < 0.005 and the unemployment rate has a significant negative effect on economic growth because of the prob value = 0.0375 <0.05. Meanwhile, the financial openness variable as indicated by FDI and trade openness has no significant effect on sustainable economic growth in ASEAN because the prob value of each variable is greater than 0.05. Furthermore, simultaneous statistical tests are indicated by a prob value of F = 0.0000 or 0% less than α = 5%, which means that trade openness, financial openness, inflation and unemployment simultaneously affect inclusive growth in ASEAN countries. The coefficient of determination (adjusted-$R^2$) value of 0.9712 indicates that economic growth is influenced by economic openness and macroeconomic variables of 97.12% and only 2.88% is explained by other variables outside the model.

Table 2. Result of Fixed Effect Model (FEM)

<table>
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<th>Variables</th>
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<tr>
<td>Constant</td>
<td>315972.5</td>
</tr>
<tr>
<td></td>
<td>(6.340)***</td>
</tr>
<tr>
<td>TO</td>
<td>11844.24</td>
</tr>
<tr>
<td></td>
<td>(1.007)</td>
</tr>
<tr>
<td>FDI</td>
<td>667.644</td>
</tr>
<tr>
<td></td>
<td>(0.289)</td>
</tr>
<tr>
<td>INF</td>
<td>-9262.220</td>
</tr>
<tr>
<td></td>
<td>(-4.647)***</td>
</tr>
<tr>
<td>UNEM</td>
<td>-22738.77</td>
</tr>
<tr>
<td></td>
<td>(-2.107)**</td>
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<td>Adj R-Squared</td>
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<td>F-stat</td>
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Source: data processed

Based on the results of the panel regression analysis, it can be seen in the following equation:

\[
Y = 315972.5 + 11844.239 TO + 667.644 FDI - 9262.220 INF - 22738.77 UNEM  \tag{2}
\]

From the equation above shows that the regression coefficient value for trade openness is 11844.239 which means the increasing ratio of trade openness 1%, it will increase economic growth in ASEAN by 11844.239. Similarly, the value of FDI which is a proxy for financial openness has a coefficient value of 667,644 which means that when financial openness increases by 1%, economic growth increases by 667,644. Furthermore, the macroeconomic variables that are
inflation and unemployment have coefficient values of 9262.220 and 22738.76. When inflation increases by 1%, it will make economic growth decreases by 9262.220 and an increase in unemployment by 1% makes economic growth 22738.76.

Every country tries to create positive economic growth. High economic growth is not enough if it is not sustainable because economic growth is achieved in order to support the process of economic development. The results of the study show that in order to increase economic growth and achieve sustainable economic growth in ASEAN countries, it is necessary to pay attention to the inflation rate and the unemployment rate. High inflation rates have a significant negative effect on economic growth. This means that the higher the inflation, the lower the economic growth in ASEAN countries. High inflation indicates a continuous increase in prices for goods and services, thus impacting people's purchasing power which decreases or the demand for goods and services decreases. These conditions caused consumption in aggregate to decline, thus impacting economic growth. The theory of economic growth according to Keynes states that one of the factors to support economic growth is public consumption. This is in line with several studies which state that an increase in inflation will have a negative impact on economic growth (Tahir & Azid, 2015; Asnawi & Fitria, 2018; Maulida et al., 2018).

The unemployment rate variable also has a significant negative impact on sustainable economic growth in ASEAN countries. Increasing unemployment actually lowers the rate of economic growth. Okun's Law states that Okun's Law states that the addition of unemployment will reduce the level of output produced, so that Gross Domestic Product also decreases (Ronaldo, 2019). On the other hand, the more labor force that is not working or unemployed will make people's incomes decrease even negatively because they do not get wages. It makes the people are unable to fulfill their daily needs which has an impact on decreasing consumption. Thus, the calculation of national income as an indicator to measure economic growth from both the production, income and expenditure approaches will decrease, which means that economic growth will decrease along with an increase in unemployment.

The manifestation of economic openness is that the variables of trade openness and financial openness have a positive but not significant effect on economic growth in ASEAN countries. This result is different from several studies which show that trade openness can significantly increase economic growth (Purnomo & Mudakir, 2020; Taiwo & Olalekan, 2021; Fitriani et al., 2021). Not all countries in ASEAN are able to optimize their trade openness because they are not ready to face the challenges of global industrial competitiveness, so the benefits received from trade openness are not significant in driving economic growth. Meanwhile, from the investment side, it is seen from Foreign Direct Investment for financial openness because financial openness means increasing the possibility of accessing international financial markets that can fund domestic investment projects
When some countries have relatively small FDI values, while other countries have fast growing FDI values, the impact on economic growth is also different. The value of foreign direct investment among ASEAN member countries is not evenly distributed, for example, it is only predominantly targets to Singapore so its contribution of FDI to economic growth is relatively small in ASEAN (Wau et al., 2022). Thus, the variables of trade openness and financial openness in ASEAN countries have not been able to significantly influence economic growth to create inclusive growth.

**Conclusion**

The results of the study show that the variables of trade openness and financial openness as a form of economic openness do not have a significant effect on inclusive economic growth in ASEAN because economic conditions differ between countries, thus impacting the level of economic openness. There are two variables which are also macroeconomic indicators that can influence sustainable economic growth in ASEAN, namely inflation and unemployment. Both inflation and unemployment rates have a negative effect on economic growth. Based on the research results, it can be suggested to policy makers that if you want to increase economic growth, you must be able to maintain inflation and unemployment rates. But it is not easy to achieve both low, considering that in the short term according to Philip's Curve there is a tradeoff between inflation and unemployment. This means that if inflation is low, unemployment will be high in the short term. Thus, future researchers should look at the effect of which variable is the most powerful in increasing economic growth, so that policy makers can prioritize inflation or unemployment which needs to be maintained in the short term and long term. In addition, policy makers should increase economic openness, both trade and finance because both have a positive influence on realizing economic growth.

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