

The Influence of Economic Freedom, Macroeconomic Variables, and the Covid-19 Pandemic on Economic Growth



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ABSTRACT: The aim of APEC cooperation is to promote sustainable and inclusive economic growth, as well as enhance cooperation and economic integration among its members. This study aims to analyze the influence of economic freedom, foreign direct investment, international trade, labor force, inflation, and the Covid-19 pandemic on economic growth in the 19 APEC member countries using multiple linear regression method. This research examines the impact of economic freedom, foreign direct investment, international trade, labor force, inflation, and the Covid-19 pandemic on economic growth. The analysis results indicate that economic freedom, although important, may have limited impact in weak institutional settings. Conversely, foreign direct investment and international trade have proven to have significant positive effects by bringing capital, technology, and innovation as well as enhancing economic efficiency. Moreover, skilled labor force and controlled inflation also support economic growth. However, the Covid-19 pandemic has caused serious disruptions by disrupting supply chains, decreasing demand, and creating economic uncertainty, highlighting the importance of economic resilience and public health. These findings emphasize the importance of policies supporting these factors to drive sustainable economic growth.

KEYWORD: Economic Growth, Economic Freedom, Macroeconomic Variables, and Pandemic Covid-19.

I. INTRODUCTION

Real GDP is a crucial indicator for assessing the economic growth of a country, highlighting the importance of production factors in the neoclassical economic growth model for economic advancement. Quantitative measurement allows for annual comparison of national income to depict a country's economic status, becoming the standard method for evaluating economic progress (Adu-Gyamfi et al., 2020).

In the evolving era of globalization, the Asia-Pacific Economic Cooperation (APEC) holds a strategic position as a multilateral forum playing a crucial role in shaping the regional economic direction. Established in 1989, APEC endeavors to integrate the economies of its members through trade and investment liberalization, with the primary goal of enhancing economic growth and prosperity in the Asia-Pacific region. With 21 member economies spanning various continents, from North America to Southeast Asia, APEC serves not only as an economic bridge between nations but also as a catalyst for sustainable economic innovation and cooperation. The Asia-Pacific Economic Cooperation (APEC) focuses on advancing economic growth and prosperity in the Asia-Pacific region through trade and investment liberalization, enhancing economic and technical cooperation, and promoting regional economic integration. By promoting more open and efficient markets, APEC aims to ensure that all its members can benefit from an integrated global economy (Aulia et al., 2023).

The Asia-Pacific Economic Cooperation (APEC) plays a crucial role in promoting economic growth in the Asia-Pacific region. By facilitating freer and more open trade and investment, APEC significantly contributes to creating a conducive business environment for cross-border economic exchange. This not only stimulates market expansion for goods and services but also enables the flow of capital and technology among member countries, thereby supporting innovation, enhancing production efficiency, and creating job opportunities. In the long run, these efforts lead to inclusive and sustainable economic growth, bringing greater prosperity to communities across the region (Aulia et al., 2023).

The Influence of Economic Freedom, Macroeconomic Variables, and the Covid-19 Pandemic on Economic Growth

Therefore, examining the stability and enhancing economic growth are essential in achieving APEC's goals, considering APEC functions as a primary platform for economic collaboration. According to information from the APEC Secretariat in 2022, in 2021, the APEC region contributed approximately 40% to the world's population (approximately 2.8 billion people out of a total of 7 billion), accounting for about 44% of the total global trade value (approximately USD 17 trillion out of a total of USD 37 trillion), and generating around 55% of global GDP (approximately USD 32 trillion out of a total of USD 58 trillion). These conditions offer opportunities for APEC member economies to address their domestic economic uncertainties. Moreover, the selection of APEC member countries as samples in this study is based on the notable differences in economic growth across various parts of the Asia-Pacific, which still remain uneven. Below is a comparison chart between APEC GDP and World GDP from 2015 to 2022:

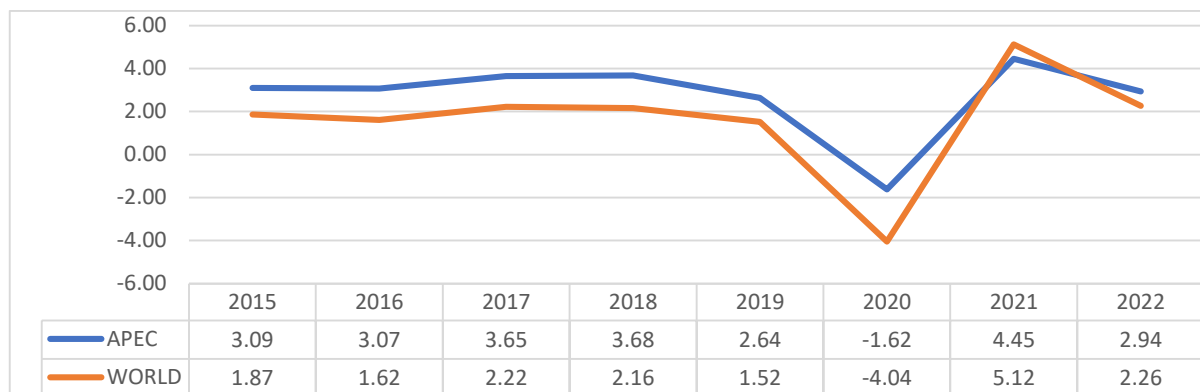


Figure 1. A Comparison of APEC GDP with World GDP from 2015 to 2022.

Source : World Bank, 2023.

According to 2023 World Bank data Figure 1, the APEC economy has shown fluctuations over the past seven years, recording its highest growth of 4.45% in 2021, while the global economy was at 5.12%. In 2020, both APEC and the world experienced contractions, -1.62% and -4.04% respectively, with 19 APEC members experiencing declines, most severely in Hong Kong at -6.54%. Brunei, China, and Vietnam recorded positive growth in 2020 amidst the global disruption caused by the COVID-19 pandemic, affecting economies of both developed and developing countries. This crisis underscores the need to protect the vulnerable and drive reforms to strengthen economic growth for global recovery (Soava et al., 2020).

Economic growth can be achieved through granting economic freedom to all citizens, which is a fundamental right to manage their economic resources freely. According to Gwartney et al. (2005) economic freedom is the individual's right to manage private economic resources or assets without government interference in the market. Thus, individuals have the freedom to work, produce, consume, and invest according to their preferences, with the assurance of state protection and without hindrance from government actions.

Several previous studies have indicated that there are several macroeconomic variables that can influence economic growth, namely foreign direct investment, international trade, labor force, inflation, and Pandemic Covid-19 (Adeniyi, 2020; Keho, 2017; Liang et al., 2021; Ma'in & Mat Isa, 2020; Nguyen et al., 2022; Pandya & Sisombat, 2017; Simanungkalit, 2020; Susilo, 2018; Wahyudi & Palupi, 2023). The neoclassical economic growth theory (Solow, 1956) and the endogenous growth theory (Romer, 1986) acknowledge the significance of innovation in stimulating growth, enhancing productivity, and fostering technological progress.

According to data from The Heritage Foundation (2023), the economic freedom index comprises twelve quantitative and qualitative factors, including property rights, trade freedom, fiscal freedom, government spending, business freedom, investment freedom, labor freedom, monetary freedom, financial freedom, government integrity, judicial effectiveness, and tax burden. Nations that uphold individual freedom in economic activities tend to enhance prosperity for their populace.

Inflation is one of the macroeconomic variables affecting economic growth. In macroeconomics, inflation serves as a reference point to assess a country's economic stability. High economic growth is achieved with stable prices and inflation rates. Unstable inflation rates can weaken the economic condition. If this situation persists, it may lead to sluggish growth and negative impacts on economic expansion. Besides inflation, another macroeconomic variable influencing economic growth is Foreign Direct Investment (FDI). FDI serves as a significant contributor to economic growth in many developing and developed nations. Foreign direct investment assists companies in other countries in improving productivity and expanding market reach. This is a crucial element that can determine the direction of economic policy, fostering economic development for society (Wahyudi & Palupi, 2023).

The Influence of Economic Freedom, Macroeconomic Variables, and the Covid-19 Pandemic on Economic Growth

In addition to Foreign Direct Investment (FDI), another macroeconomic variable that influences economic growth is international trade. When exports and imports occur, there is a transfer of production factors from exporting countries to importing countries. In various nations, international trade serves as a source of income and consistently contributes to GDP growth. International trade fosters progress within a country and naturally promotes technological advancements, transportation, industrialization, as well as the presence of foreign or multinational corporations, specialization, market expansion, and ultimately economic growth (Wahyudi & Palupi, 2023).

Economic growth is the result of population activities. Empirical research on the influence of population on economic output yields varied results. Generally, the relationship between population and economic growth is grouped into four categories: pessimistic, optimistic, multidimensional, and neutral. The pessimistic group argues that population growth will have a negative impact on economic growth. The optimistic group contends that population growth will have a positive impact on economic growth. The multidimensional group argues that population growth can have both positive and negative effects on economic growth. Meanwhile, the neutral group argues that population growth does not have a significant impact on economic growth (Brkić et al., 2020).

The Covid-19 pandemic has caused significant impacts on global economic growth. Measures such as restrictions and lockdowns implemented to control the spread of the virus have led to decreased economic activity, reduced production, and disruptions in the global supply chain. Additionally, the economic uncertainty generated by the pandemic has affected investment, consumption, and overall market demand. All of these factors have contributed to the slowdown in economic growth in many countries worldwide during the Covid-19 pandemic (Soava et al., 2020). This study aims to analyze the influence of economic freedom, foreign direct investment, international trade, labor force, inflation, and the Covid-19 pandemic on economic growth in 19 APEC member countries from 2015 to 2022. Classical Economic Growth Theory by Adam Smith explains that essential factors in economic growth are human resources (population quantity and quality) and capital stock. According to this theory, an economy will grow with an increase in population that expands the market and promotes specialization. Moreover, an increase in capital stock will drive total output growth and market expansion.

According to Todaro & Smith (2015) the Solow-Swan and Romer theories highlight the vital role of labor, capital, and innovation in economic growth. Romer's endogenous theory emphasizes the importance of resource governance, government institutions, and innovation in enhancing societal well-being. Meanwhile, Schumpeter's theory underscores the role of entrepreneurship and innovation in driving economic growth. All of these theories underline the role of innovation and human resources in fostering sustainable economic growth.

II. RESEARCH METHODS

This study employs a quantitative descriptive research method using secondary data, which comprises time series and cross-sectional data, also known as panel data. The research includes six independent variables: economic freedom (Economic Freedom Index), foreign direct investment (in US\$), international trade (% of GDP), labor force (% of GDP), inflation (%), and the Covid-19 pandemic (dummy 1 – 0), along with one dependent variable: economic growth (%). The regression equation used to model the panel data is as follows:

$$PE_{it} = \beta_0 + \beta_1 EFI_{it} + \beta_2 LFDI_{it} + \beta_3 Tr_{it} + \beta_4 LF_{it} + \beta_5 Inf_{it} + \beta_6 D_Covid_{it} + \varepsilon_{it}$$

Keterangan :

PE	= Economic Growth (%)
EFI	= <i>Index of Economic Freedom</i>
LFDI	= <i>Foreign Direct Investment</i> (Ln US \$)
Tr	= <i>Trade</i> (%)
LF	= <i>Labor Force</i> (%)
Inf	= <i>Inflation</i> (%)
D_Covid	= <i>Dummy Variable</i> (Before and Pasca Pandemi Covid-19)
β_0	= <i>Constanta</i>
β_{1-6}	= <i>Regression Coefficient</i>
ε	= <i>Error Term</i>
i	= <i>cross section</i>
t	= <i>time series</i>

The Influence of Economic Freedom, Macroeconomic Variables, and the Covid-19 Pandemic on Economic Growth

The cross-sectional data in this study consist of nineteen APEC member countries utilized from 2015 to 2022, including Australia, Brunei Darussalam, Canada, Chile, China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Mexico, New Zealand, the Philippines, Peru, Russia, Singapore, Thailand, the United States, and Vietnam. This research will utilize the EViews analysis tool.

III. RESULTS AND DISCUSSION

Results

Before estimating the research model, the first step is to select the best data panel regression approach by considering three types of models: the common effect model (CEM), fixed effect model (FEM), and random effect model (REM). The results of choosing the best regression model are presented in the following table:

Table 1. The Selection of the Best Model

	Selection Models	Prob/Both	Conclusion
Chow Test			FEM
Cross-section F	FEM or CEM	0.0000	(P < 0,05)
Cross-section Chi-square		0.0000	
Hausman Test			FEM
Cross-section random	FEM or REM	0.0000	(P < 0,05)

Source : *Output E-views*

Based on the results of the regression model tests in Table 1, it was found that the fixed effect model (FEM) is the most suitable statistical approach for this study. Therefore, the Lagrange Multiplier test is not needed in this analysis context. The next step is to conduct classical assumption tests. Based on the correlation test between independent variables coefficients, none of the independent variables have a correlation value exceeding 0.80. Thus, the model in this study passes the multicollinearity test. According to the heteroskedasticity test in this study, there is no heteroskedasticity problem. Based on the classical assumption tests conducted, the data in this study are exposed to heteroskedasticity. Furthermore, in the normality test, the data used in this study are normally distributed, allowing for regression analysis to proceed.

Table 2. Results of Multiple Linear Regression Test with Fixed Effect Model (FEM)

Variable	Coefficien	t-stat	Prob.
CONSTANTA	-30.69365	7.662574	-4.005658
EFI	0.049446	0.060141	0.822172
LFDI	0.506416	0.228682	2.214502
TR	0.080003	0.018933	4.225546
LF	0.213453	0.069773	3.059242
INF	0.330047	0.100773	3.275142
D_COVID	-2.425697	0.317407	-7.642233
Prob. F-Stat	0.000000		
Adj. R ²	0.665288		

Source : *Output E-views*

From the results of this regression test, it can be concluded that in the presented equation:

$$PE_{it} = -30.69365 + 0.049446 \text{EFI}_{it} + 0.506416 \text{LFDI}_{it} + 0.080003 \text{Tr}_{it} + 0.213453 \text{LF}_{it} + 0.330047 \text{Inf}_{it} - 2.425697 \text{D_Covid}_{it} + \varepsilon_{it}$$

The regression analysis results indicate that the regression constant has a value of -30.69365. This means that if all variables except the COVID-19 dummy are zero, the economic growth is estimated to reach -30.69365. The coefficient of the economic freedom variable is 0.049446, but its probability (0.4125) exceeds the significance level $\alpha = 0.05$, indicating its insignificance on economic growth. Meanwhile, the variables of foreign direct investment and international trade have positive coefficients with probabilities less than $\alpha = 0.05$, showing significance on economic growth. The variables of labor force, inflation, and the COVID-19 dummy are also significant in influencing economic growth, with coefficients of 0.213453, 0.330047, and -2.425697, respectively, and probabilities less than the significance level $\alpha = 0.05$. The negative coefficient on the COVID-19 dummy indicates the negative impact of the pandemic on economic growth, with each unit increase in the COVID-19 dummy associated with a

The Influence of Economic Freedom, Macroeconomic Variables, and the Covid-19 Pandemic on Economic Growth

decrease in economic growth of -2.425697, assuming other variables remain constant. This suggests that economic conditions are influenced by factors such as investment, trade, inflation, labor force, and the impact of the COVID-19 pandemic, with the COVID-19 dummy variable being the most significant factor in explaining variations in economic growth.

Table 2 shows the results of the F-statistic test, with a probability value smaller than the significance level $\alpha = 0.05$, namely 0.00000, indicating acceptance of H1. This indicates that simultaneously, the variables of economic freedom, foreign direct investment, international trade, labor force, inflation, and the COVID-19 pandemic have a significant influence on economic growth in the 19 APEC countries from 2015 to 2022.

From Table 2, the adjusted R-square value is found to be 0.6652888. This indicates that the variables of economic freedom, foreign direct investment, international trade, labor force, inflation, and the COVID-19 pandemic, collectively, can explain approximately 66% of the variation in economic growth. The remaining approximately 34% is explained by other factors not included in this study.

Discussion

Based on the panel data model, no significant influence of economic freedom on economic growth was found. This finding is consistent with previous research by (Elina & Setyadharma, 2022; Quddus, 2022), which also indicated that economic freedom does not have a significant impact on economic growth. These results do not support endogenous economic growth theory, which implies that economic freedom may affect overall macroeconomic conditions but does not directly influence internal factors essential for long-term growth. This study suggests the presence of other factors affecting the relationship between economic freedom and economic growth, as shown in Figure 2. Many developing countries have not yet achieved high levels of economic freedom, leading to a greater dependence on government intervention (Zhong & Tang, 2018). This may explain why economic freedom does not have a significant impact on driving economic growth in some countries.

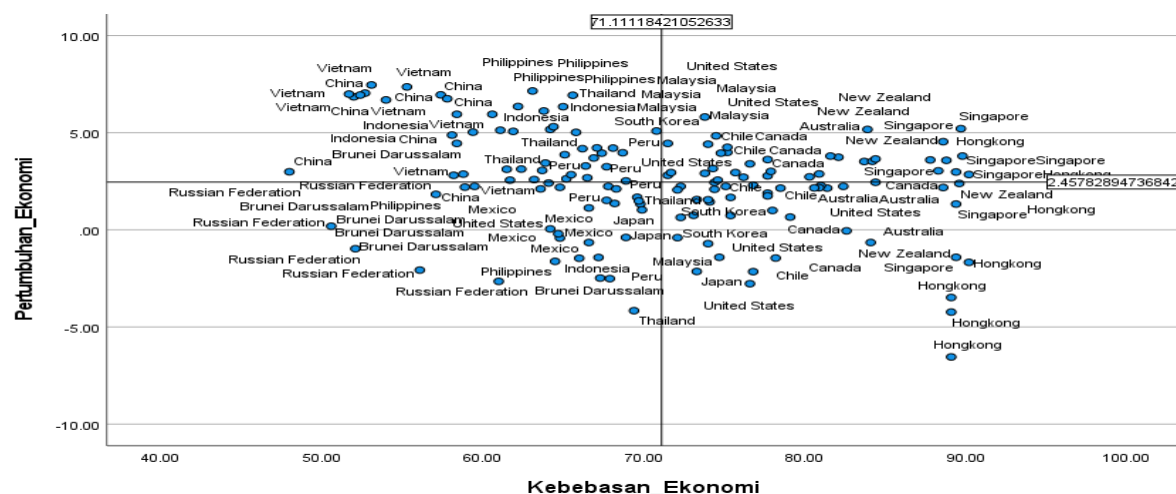


Figure 2. Quadrant Diagram

Source : Output SPSS

Many developing countries have not yet achieved the desired level of economic freedom. This is due to several factors, such as political instability, weak institutions, high levels of corruption, lack of education and skills in the workforce, and dependence on specific economic sectors. Overall, to improve the level of economic freedom, developing countries need to undertake reforms in various aspects, including enhancing political stability, strengthening institutions, reducing corruption, improving education and skills in the workforce, and diversifying the economy (Zhong & Tang, 2018).

In the panel data model, foreign direct investment (FDI) has been proven to have a positive and significant impact on economic growth. This finding is consistent with previous research, such as (Adeniyi, 2020; Elina & Setyadharma, 2022; Lozi & Shakatreh, 2019; Makiela & Ouattara, 2018; Onafowora & Owoye, 2019; Susilo, 2018), which indicates that both developed and developing countries can enhance economic growth through FDI. Endogenous growth theory supports this concept, where FDI brings new capital and technology, enhances productivity of local companies, and stimulates innovation. However, the success of FDI depends on government policies, market structure, and institutional capacity. It is crucial for recipient countries to adopt wise policies, including infrastructure development, promotion of innovation, effective regulation, and environmental protection, to maximize its benefits and minimize risks. Thus, FDI can play a significant role as a driver of economic growth, as long as it is managed wisely and integrated into comprehensive economic development strategies.

The Influence of Economic Freedom, Macroeconomic Variables, and the Covid-19 Pandemic on Economic Growth

Based on the panel data model, international trade plays a crucial role in enhancing economic growth, consistent with previous research such as (Burange et al., 2019; Elina & Setyadharma, 2022; Nuraini P.P & Mudakir, 2020; Shayanewako, 2018). International trade also aligns with David Ricardo's theory (1817), which highlights the comparative advantage of countries in production based on resources and technology. This enables resource efficiency, acquisition of new technology, and skill enhancement, driving global economic growth. Despite challenges, global economic integration can lead to sustainable and inclusive economic growth worldwide.

Based on previous analysis, the workforce has a positive and significant impact on economic growth, consistent with previous research such as (Mirah et al., 2020; Soava et al., 2020; Supratiyoningsih & Yuliarmi, 2022; Ul Haque et al., 2019; Utami et al., 2021). Research indicates that an increase in the labor force contributes to economic growth. Endogenous growth theory emphasizes the importance of the workforce in driving economic growth, where an increase in the labor force can stimulate economic production and productivity, enhance consumer spending, and investment in production capacity. Appropriate policy measures are needed to ensure effective utilization of the workforce, through investment in education, training, and sustainable job creation.

Based on previous analysis, inflation has a positive and significant impact on economic growth, consistent with previous research such as (Adeniyi, 2020; Ambarwati et al., 2021; Sari & Anggadha Ratno, 2020). The effects of inflation include sustained cost increases, prompting capital owners to switch to speculative activities. From the perspective of inflation demand-supply theory, the interaction between aggregate demand and supply can trigger sustained price increases. Keynesian theory is also relevant, stating that inflation can be triggered by excessive consumer or investment demand. The importance of understanding economic theory in the context of inflation highlights efforts to create long-term economic stability.

Previous analysis indicates that the Covid-19 pandemic has had a significant negative impact on economic growth, consistent with research by (Apergis & Apergis, 2021; Liang et al., 2021; Ramadhani, 2023). This pandemic has greatly affected public health, resulting in millions of infections and deaths, as well as putting pressure on healthcare and mental health systems. Economically, lockdowns and movement restrictions have led to the bankruptcy of many small and medium-sized enterprises, a global increase in unemployment, and recessions in many countries. Social and work changes have also occurred, with the accelerated adoption of digital technology, although it has posed challenges of greater digital and social inequality.

IV. CONCLUSION

This study aims to analyze the impact of economic freedom, foreign direct investment, international trade, labor force, inflation, and the Covid-19 pandemic on economic growth in the context of 19 APEC countries between 2015-2022 using multiple linear regression. The analysis results indicate several important findings. Although economic freedom is considered important, in situations of weak institutions or ineffective regulations, its impact on economic growth may be limited.

On the other hand, foreign direct investment has a significant positive impact by bringing capital, technology, and innovation that strengthen the domestic sector, while international trade enhances efficiency through specialization, stimulates innovation, and strengthens global economic integration. Additionally, skilled labor force and controlled inflation have also been proven to support economic growth. However, the Covid-19 pandemic has caused serious disruptions by disrupting supply chains, reducing demand, and creating economic uncertainty, highlighting the importance of economic resilience and public health. Overall, these findings underscore the importance of policies that support these factors to promote sustainable economic growth.

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