



## Analysis Determinants of Economic Growth in Asian Countries: an Empirical Study of Middle-Income and High-Income Countries

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### ABSTRACT

Every country in the world always expects increased economic growth. So in analyzing the factors that affect economic growth, there are many determinants. However, the IMF reports that the economy in Asia is slowing down due to declining trade. This study uses secondary data with panel data regression method analysis. The results showed that in both middle-income and high-income Asian countries, economic freedom has a positive and insignificant effect on economic growth. While trade openness has a negative and significant effect. For FDI variables and LFPR have a positive and significant effect. While the country dummy variable shows economic growth in middle income and high income in Asian countries shows the results that there are significant differences.

## INTRODUCTION

In the context of economics, economic growth is an important topic that should always be discussed and analyzed in every country. Although there are other topics, such as poverty rate, inflation rate, interest rate, investment, and unemployment rate, it is the most commonly discussed topic. However, economic growth is the source of other factors that are also considered important in a country (Suparyati, 2014). Asia, the largest continent in the world, has many countries within its vast territory. The wide range of countries in the Asian continent contributes to significant variations in terms of cultural, political and economic aspects. Based on the classification provided by the World Bank (2023), most countries in the West Asian region can be categorized as middle-income countries. In contrast, the majority of countries in Southeast Asia, Central Asia and South Asia are classified as low-income countries, and when compared to the eastern region of Asia have the highest levels of prosperity. Despite these disparities, the majority of countries in Asia remain categorized as developing countries. Based on data from the International Monetary Fund (2018), it shows that over a five-year period, Asia's average economic growth rate has contributed more to global economic growth than the Americas, Europe, Africa and Australia.

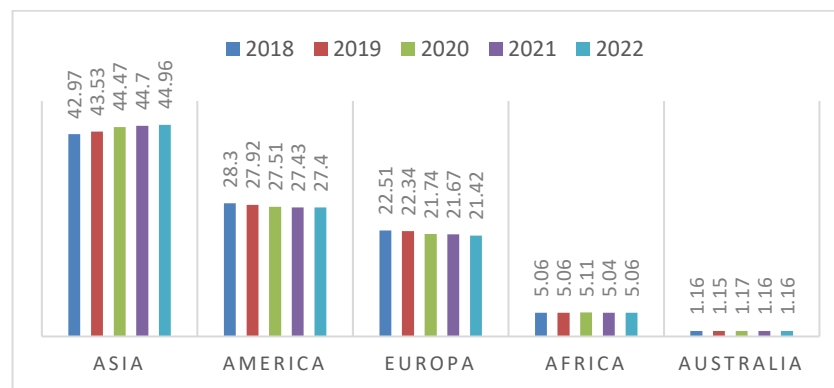


Figure 1. Contribution of Economic Growth in 5 (Five) Regions to World GDP

Economic growth in 2018 Asia's contribution to global GDP was 43%. Compared to other countries, Asia contributed more. But even though Asia's economic growth contributes more globally, the International Monetary Fund reported that Asia's long-term economic prospects face obstacles. One of them is related to trade, which is slowing down. Therefore, it is important for Asia to integrate with the global economy through the liberalization of trade, investment and utilizing human resources. Therefore, to optimize economic growth rates, it is important to identify the growth variables that will encourage each country to progress and not be constrained. In the context of dynamic changes in the global economy, an in-depth understanding of the factors that influence the economic growth of middle- and high-income Asian countries is becoming increasingly important. The measurement of economic growth serves as an important indicator for countries in ensuring their sustainable development and stability. Therefore, it is imperative to encourage collaboration between countries to effectively meet their respective needs, especially by introducing economic freedom and trade openness. These efforts can also facilitate collaboration

between countries in development planning through global investments that can accelerate the realization of planning goals and boost employment growth.

There are a number of studies that have different. Perceptions on the application of the economic freedom system encourage economic growth and have a positive influence on the economic development of various countries such as in the research of Brkić (2020) and Zeno (2022). In another study conducted by Setyadharna (2022) it shows that economic freedom has no significant effect on economic growth. In addition, research conducted by Bakir (2019) the results of his research show that the proportion of economic freedom in the high-income country group is greater than that in the low-income country group. While the relationship between openness to trade and economic growth. There are differences in research including research from Muhaimin (2023), Misi (2022) and Intisar et al (2020) there is a significant influence between trade openness and economic growth. This is also in line with research from Hossain et al (2022) whose research results also say trade openness contributes to economic growth in Asia. Meanwhile, research conducted by Zeno (2022), Astuti (2020) and Rahman (2020) suggest that trade openness has a negative effect on economic growth. As for the relationship between economic growth and foreign direct investment in research Zeno (2022), Elina & Setyadharna (2022), Hossain et al (2022), Misi (2022) and Astuti (2020) that foreign direct investment has an influence on economic growth. However, in research Muhaimin (2023) the results of FDI have no effect on economic growth. For the relationship between economic growth and labor force participation rate. In the research of Zeno (2022), Misi (2022), and Amni Intisar et al (2020) that the labor force participation rate has a positive influence on economic growth. However, in research Muhaimin (2023) the TPAK results had no effect on economic growth.

This study uses data on economic freedom, trade openness, foreign direct investment and labor force participation rate. The data used in this study comes from Asia. However, in previous studies there has not been to assess the extent of differences in economic development between middle-income countries and high-income countries, therefore to improve previous research, adding dummy variables to the group of middle-income and high-income countries in order to provide appropriate policy advice in both regions of the country. Based on the background explanation above, there are many research gaps and the absence of comparisons between incomes, it is necessary to conduct research on analyzing the effect of economic freedom, trade openness, foreign direct investment, and the level of labor force participation on economic growth partially or simultaneously in Asian countries by comparing middle and high income.

## **LITERATURE REVIEW**

### ***Economic Growth***

The definition of economic growth according to the findings of an economist named Kuznet (1971), economic growth is defined as the process of gradually increasing the production capacity of a country over time so that it can meet demand. Meanwhile, according to Todaro (2000) economic growth is a

complex set of factors, including transformative changes in social structure, public sentiment, and national institutions, while trying to achieve rapid economic growth, overcome income inequality, and reduce poverty. According to North (1991) in Brunet (2020), the determinants of economic growth are institutions, technological progress, population or labor force growth, and investment.

### ***Classical Economic Growth Theory***

Leading economic figures, including Adam Smith and David Ricardo, put forward this theory. Adam Smith outlined two fundamental components of economic growth, namely total output growth and population growth, i.e. : An increase in total output (which has three components: natural resources, human resources, and the supply of capital goods) and population growth.

### ***Neo-Classical Growth Theory***

A pair of economists named Solow and Swan formulated this theory. According to this theory, economic growth occurs due to the development and addition of factors that affect aggregate supply. Neoclassical theory emphasizes the importance of technological progress and the evolution of factors of production as determinants of economic growth (Sadono, 2000). This theory categorizes the inputs that affect economic growth into three types:

- a. The effect of capital on economic growth
- b. The impact of technology on economic growth
- c. The impact of employed labor on economic growth

### ***Harrod-Domar Growth Theory***

Harrod-Domar's theory is an extension of Keynes' inadequate analysis, which analyzes conditions that are not present in Keynes' theory but are necessary for economic growth and development in the long run. According to Harrod-Domar, in order for all available capital goods to be fully utilized, aggregate demand must increase by an amount equal to the capacity of the capital goods increased by previous investment. Therefore, to ensure healthy economic growth, the investment rate must rise consistently from year to year (Fatihudin, 2019).

### ***Endogenous Economic Growth Theory***

Endogenous growth theory was coined by Romer and Lucas in Leasiwal (2022) and it provides a simpler and more robust theoretical foundation for the long-run relationship between international trade, economic growth, and economic development. According to this hypothesis, reducing trade barriers will increase economic growth and development in the long run.

### ***Economic Freedom***

Economic freedom as defined by The Heritage Foundation (2023) is the inherent right of every individual to exercise authority over their own labor and property. Individuals are free to work, produce, consume and invest as they see fit in an economically free society. According to research by Gwartney and

Lawson (2008) the Economic Freedom Index (EFI), published in Economic Freedom of the World every year, is the most comprehensive attempt to measure economic freedom. Each aspect assessed in economic freedom is crucial in promoting and sustaining individual and national well-being.

The Heritage Foundation (2023) presents a tool for assessing economic freedom that consists of twelve qualitative and quantitative factors organized into four overarching categories, or pillars, of economic freedom:

- 1) Rule of law (property rights, government integrity, judicial effectiveness)
- 2) Government size (government spending, tax burden, fiscal health)
- 3) Regulatory efficiency (business freedom, labor freedom, monetary freedom)
- 4) Market openness (trade freedom, investment freedom, financial freedom)

The Economic freedom index evaluates the state of these four different categories by measuring 12 specific aspects of economic freedom, each of which is scored on a scale ranging from 0 to 100. To get an overall score for economic freedom for each economy, the scores of the 12 components of economic freedom, calculated from various sub-variables, are given equal weight and then averaged.

***Hypotesis EF :***

H1 : Economic freedom has a significant effect on economic growth in Asian countries in 2018-2022.

H0 : Economic freedom has no significant effect on economic growth in Asian countries in 2018-2022.

***Trade Openness***

The Organization for Economic Co-operation and Development (OECD) states that the trade-to-GDP ratio, also known as the trade openness ratio, is often used as a metric to measure the significance of foreign transactions in relation to domestic transactions. The calculation of this indicator involves determining the simple average (mean) of total trade (sum of exports and imports of commodities and services) relative to gross domestic product for each country. Meanwhile, according to the World Bank (2023), Trade Openness (TO) expressed in trade data (% of GDP) is the ratio of products and services exported and imported from other countries calculated as a share of gross domestic product.

***Hypotesis TO :***

H2 : Trade openness has a significant effect on economic growth in Asian countries in 2018-2022.

H0 : Trade openness has no significant effect on economic growth in Asian countries in 2018-2022.

***Foreign Direct Investment***

According to Krugman in Putri (2019) foreign direct investment is an international capital movement in which companies from one country start or expand their operations in another country. As a result, not only resources are

transferred, but also control over companies in other countries. Foreign investments can be classified into three categories: first, portfolio refers to financial investments made abroad in the hope of gaining financial returns from the venture. These investments are made through the purchase of debt or securities issued by companies. Second, a series of long-term investments made in a company located in another country. Third, credit for exports. Foreign direct investment has a significant role in driving economic growth by creating jobs, encouraging increased value-added creation, increasing the production of goods and services, and improving the overall welfare of society (Mahriza, 2019).

***Hypotesis FDI :***

H3 : Foreign direct investment affects economic growth in Asian countries in 2018-2022.

H0 : Foreign direct investment has no effect on economic growth in Asian countries in 2018-2022.

***Labor Force Participation Rate***

According to the Badan Pusat Statistik and World Bank, the Labor Force Participation Rate (LFPR) is the part of the working-age population (15 years and over) that is in the labor force, which includes people who are working and people who are looking for work. the labor force participation rate shows that for all opinions in the working age and can also be expressed in the form of certain groups such as male groups, female groups in cities, educated labor groups, children aged 10-14 years in villages, and so on. In simple terms, the labor force participation rate is the number of labor force divided by the number of labor force in the same category. Sumarsono in Wijimulawiani (2022) states that many factors influence the level of labor force participation, including: the number of people attending school, age, the number of people who take care of the household, wage scale, family income level and number of dependents, level of education, and economic activities.

***Hypotesis LFPR :***

H4 : The labor force participation rate has a significant effect on economic growth in Asian countries in 2018-2022.

H0 : The labor force participation rate has no significant effect on economic growth in Asian countries in 2018-2022.

***Hypotesis simultaneous variable :***

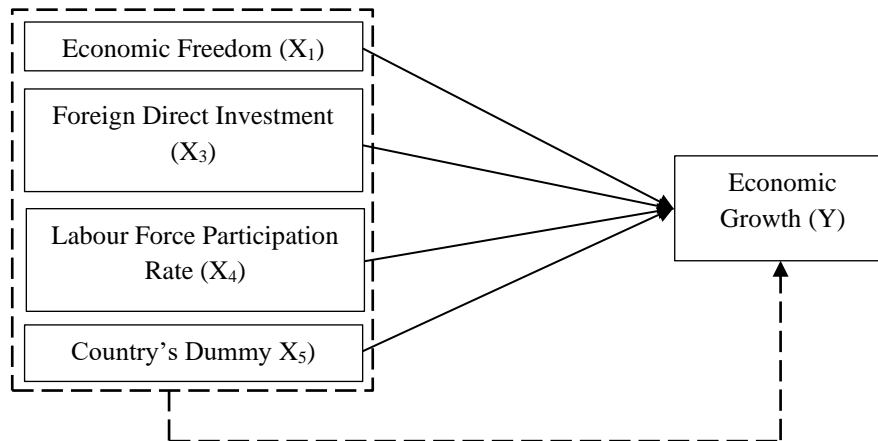
H5 : Economic freedom, trade openness, foreign direct investment, labor force participation rate, and country dummy have a significant effect on economic growth in Asian countries in 2018-2022.

H0 : Economic freedom, trade openness, foreign direct investment, labor force participation rate, and country dummy have no significant effect on economic growth in Asian countries in 2018-2022.

***Hypotesis dummy variable:***

H6 : There is a significant difference in economic growth between middle-income and high-income countries in Asia in 2018-2022

H0 : There is no significant difference in economic growth between middle-income and high-income countries in Asia in 2018-2022.



**Figure 1. Research Framework**

**METHODOLOGY**

The method used in this research is to use quantitative methods. The analysis variables in this study are economic freedom, trade openness, foreign direct investment, labor force participation rate, dummy country and economic growth. With the dependent variable (Y) and influenced, namely economic growth. While the independent variables (X) are economic freedom (X1), trade openness (X2), foreign direct investment (X3), labor force participation rate (X4), and country dummy (X5). The population of this research is 44 Asian countries, 29 middle income Asian countries and 15 high income Asian countries.

The data collection technique in this study is secondary data. This data was obtained from reputable and authoritative institutions and agencies, such as the World Bank and Heritage Foundation. This data analysis technique uses panel regression techniques, which include time series data and cross-section data. This study uses time series data from 2018 to 2022, as well as cross-section data covering 44 Asian countries including 29 middle-income countries and 15 high-income countries, resulting in a total of 220 observations.

**RESEARCH RESULT**

***Regression Model Selection***

The regression estimation approach test characterizes one of the essential methods in assessing the quality of the optimal model for this study. There are three regression models that can be used as evaluation alternatives, namely Fixed Effects Model (FEM), Random Effects Model (REM), and Common Effects Model (CEM). This study applies panel data regression analysis to explore the effect of independent variables on dependent variables within Asian countries belonging to the middle- and high-income categories.

*Chow Test*

The Chow test is used to determine the optimal model between the Common Effect Model and the Fixed Effect Model. To meet the validity criteria, the Chow test must adhere to the following principles: if the p-value is greater than 0.05, then the Common Effect Model is the most appropriate model to apply. Conversely, if the p-value is less than 0.05, the Fixed Effect Model is a more appropriate choice. The detailed estimation results of the Chow test are presented in the table attached below.

Table 1. The Results of the Chow Test

<b>Effect Test</b>	<b>Statistic</b>	<b>d.f.</b>	<b>Prob.</b>
Period F	1.000534	(4,210)	0,4083
Period Chi-Square	4.153261	4	0,3857

Source : Eviews 12 results of data processing

*Lagrange Multiplier Test*

The Lagrange Multiplier test is an evaluation tool used to determine the optimal model between the Random Effect Model and the Common Effect Model. When the Breusch-Pagan cross-section value is below five percent, this indicates that the most appropriate model to use is the Random Effect Model. The results of the Lagrange Multiplier Test are illustrated in the analysis results presented below.

Table 2. The Results of the Lagrange Multiplier Test

	<b>Cross-section</b>	<b>Test Hypotesis Time</b>	<b>Both</b>
Breush-Pagan	238.6063	0.90323	238.6966
	(0.0000)	(0.7638)	(0.0000)

Source : Eviews 12 results of data processing

The Lagrange Multiplier Test results above indicate that the Random Effect Model is the optimal model compared to the Common Effect Model. This assertion is supported by the Breusch-Pagan cross-section value which reaches 0.0000, indicating a low level of significance. Therefore, the conclusion that can be drawn from this study is the use of the Random Effect Model as a more appropriate model within the framework of the research conducted.

*Classical Assumptions Test*

Within the framework of this research, classical assumption testing is carried out as an essential preparatory step in panel data analysis and multiple regression with dummy variables. Therefore, the fulfillment of classical assumption test criteria is a must.

*Normality Test*

In the context of this study, the normality test is determined through evaluating the Jarque-Bera probability with a significance level  $\alpha$  of 5% or 0.05. If the Jarque-Bera probability value exceeds 0.05, then the research data can be considered normally distributed.

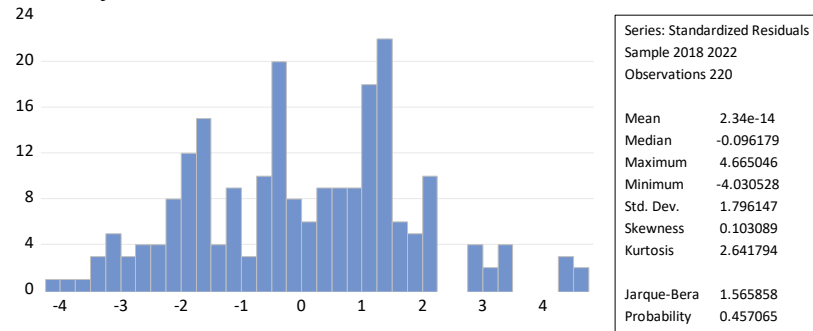


Figure 2. Results of Normality Test  
 Source: Eviews 12 Results of Data Processing

The findings from the normality test show that the Jarque-Bera probability value, of 0.457065, exceeds the significance level of  $\alpha = 0.05$ . Therefore, the conclusion can be drawn that the data is normally distributed.

*Multicollinearity Test*

Multicollinearity test is implemented to evaluate the level of correlation between independent variables in a regression model. One method of detecting multicollinearity is through observing the level of significant pairwise correlation between regressors. When the pairwise correlation coefficient, also known as zero-order, between two regressors exceeds 0.8, it can be considered as an indication of multicollinearity.

Table 2. The Results of the Multicollinearity Test

	X1	X2	X3	X4	D
X1	1.000000	0.366246	0.371995	0.524020	0.490816
X2	0.366246	1.000000	0.315936	0.350261	0.418589
X3	0.371995	0.315936	1.000000	0.248044	0.296937
X4	0.524020	0.350261	0.248044	1.000000	0.481054
D	0.490816	0.418589	0.296937	0.481054	1.000000

Source : Eviews 12 results of data processing

From the observations in the multicollinearity test table applied to the dummy variables, the regressor values in the data show numbers that are below 0.8. This illustrates that in the context of this study, the data is free from multicollinearity problems.

*Heteroscedasticity Test*

In the context of this study, the heteroscedasticity test was conducted using the park test. The criterion used in evaluating the heteroscedasticity test is when the probability of the independent variable exceeds 0.05, which indicates the absence of heteroscedasticity, with a significance level of 5%.

Table 3. The Results of the Heteroscedasticity Test  
Dependent Variables : RESABS

Variables	Coefficients	Std. Error	t-Statistic	Prob.
C	-0.002741	0.766144	-0.003578	0.9971
X1	-0.003876	0.005281	-0.733939	0.4638
X2	-0.002503	0.001110	-2.253985	0.2521
X3	0.046852	0.034105	1.373752	0.1710
X4	0.017225	0.007459	2.309375	0.2187
D	-2.287077	0.175300	-1.637630	0.1030

Source : Eviews 12 results of data processing

The results of the heteroscedasticity test applied with the park test method on this dummy data show that the probability for each independent variable exceeds the value of 0.05. Therefore, it can be concluded that in the context of this study, variance non-uniformity is not a significant problem or there is no indication of heteroscedasticity.

*Analysis of Data Panel Linear Regression*

The results of the Chow test and the Lagrange Multiplier test have implied that the most appropriate panel data model is the Lagrange Multiplier test. The model equation uses the Least Square Dummy Variable (LSDV) Method for dummy variable regression, resulting in the following equation:  $\ln Y = \alpha - \beta_1 X_1 + \beta_2 X_2 - \ln \beta_3 X_3 + \beta_4 X_4 + \beta D X D_1$ . According to the regression test shows that the regression model formed from the Economic Freedom (X1), Trade Openness (X2), Foreign Direct Investment (X3), Labor Force Participation Rate (X4), Country Dummy (X5) to the Economic Growth (Y) is:

Table 4. Results of Regression Equation

Variables	Coefficients	Std. Error	t-Statistic	Prob.
C	22.49965	0.609903	36.89055	0.0000
X1	0.000475	0.002670	0.177918	0.8590
X2	-0.991502	0.000813	-1.847351	0.0460
LnX3	0.076475	0.018293	4.180475	0.0000

X4	0.021032	0.008422	2.497120	0.0133
D	0.642028	0.317884	-2.019692	0.0447

Source : Eviews 12 results of data processing

$$\text{LnY} = 22.49965 + 0.000475X_1 - 0.991502X_2 + 0.076475X_3 + 0.021032X_4 + 0.642028D_1$$

Referring to the results regarding the regression equation shown at the top, the following conclusions can be drawn:

- a. The Economic Freedom (EF) variable shows a positive coefficient of 0.000475, with a probability value of around 0.8590, which is significantly higher than the 0.05 significance level. This result indicates that the EF variable has no significant effect on economic growth. Therefore, it can be interpreted that if there is a one-unit increase in the level of economic freedom, while assuming the other independent variables are constant, economic growth is expected to increase by 0.000475, but the impact is not statistically significant.
- b. The Trade Openness (TO) variable shows a negative coefficient of -0.001502, with a probability value of around 0.0460, which is significantly lower than the 0.05 significance level. This finding indicates that the TO variable has a significant effect on economic growth. Thus, it implies that a one-unit increase in the level of trade openness, holding the other independent variables constant, is expected to lead to a decrease of -0.001502 in economic growth.
- c. The Foreign Direct Investment (FDI) variable shows a positive coefficient of around 0.076475, with a probability value of around 0.0000, significantly lower than the 0.05 significance level. This finding illustrates that the FDI variable has a significant influence on economic growth. In other words, a one-unit increase in the level of foreign direct investment, holding the other independent variables constant, is estimated to result in an increase of about 0.076475 in economic growth.
- d. The Labor Force Participation Rate (TPAK) variable shows a positive coefficient of about 0.021032, with a probability value of about 0.0133, which is significantly lower than the 0.05 significance level. This finding indicates that the TPAK variable has a significant impact on economic growth. Therefore, a one-unit increase in the labor force participation rate, assuming the other independent variables are constant, is expected to result in an increase of about 0.021032 in economic growth.

- e. The country dummy variable shows a probability result of 0.0447 which is smaller than the significance of 0.05, meaning that there is a significant difference between middle income and high income countries. The dummy variable has a positive coefficient of -1.187662 indicating that economic growth in high-income countries is higher than that of middle-income countries in Asia.

### **Hypothesis Testing**

#### *t-test (t-statistic)*

The t statistical test is used to determine how much influence economic freedom, trade openness, foreign direct investment, labor force participation rate and country dummies have on economic growth variables. The t test is carried out by comparing the calculated t value with the t table or the t-statistic probability value with the significance at the level used, namely 0.05.

#### a. Economic Freedom

Table 5. t-test results on X1

<b>Variable</b> <b>s</b>	<b>Coefficient</b> <b>s</b>	<b>Std.</b> <b>Error</b>	<b>t-</b> <b>Statistic</b>	<b>Prob.</b>
C	22.49965	0.609903	36.89055	0.0000
X1	0.000475	0.002670	0.177918	0.8590

Source : Eviews 12 results of data processing

For the economic freedom variable, the probability value in the t-statistic test reaches 0.8590, which exceeds the significance level  $\alpha = 0.05$ . Therefore, it can be concluded that the null hypothesis (H0) is accepted, and the alternative hypothesis (H1) is rejected. This finding shows that economic freedom has a positive influence on economic growth in Asian countries. However, it does not reach a significant level of significance.

#### b. Trade Openness

Table 6. t-test results on X2

<b>Variable</b> <b>s</b>	<b>Coefficient</b> <b>s</b>	<b>Std.</b> <b>Error</b>	<b>t-</b> <b>Statistic</b>	<b>Prob.</b>
C	22.49965	0.609903	36.89055	0.0000
X2	-0.002503	0.001110	-2.253985	0.0460

Source : Eviews 12 results of data processing

For the trade openness variable, the probability value in the t-statistic test reaches 0.0460, which is below the significance level of  $\alpha = 0.05$ . Thus, the conclusion is to accept the alternative hypothesis (H2) and reject the null hypothesis (H0). This result

indicates that trade openness has a significant influence on economic growth in Asian countries.

c. Foreign Direct Investment

Table 7. t-test results on X3

Variable s	Coefficient s	Std. Error	t- Statistic	Prob.
C	22.49965	0.609903	36.89055	0.0000
LnX3	0.076475	0.018293	4.180475	0.0000

Source : Eviews 12 results of data processing

For the foreign direct investment variable, the probability value in the t-statistic test is 0.0000, which is below the significance level  $\alpha=0.05$ . Thus, the conclusion that can be drawn is to reject the null hypothesis (H0) and accept the alternative hypothesis (H3). This finding confirms that foreign direct investment has a positive and significant influence on economic growth in Asian countries.

d. Labor Force Participation Rate

Table 8. t-test results on X4

Variables	Coefficients	Std. Error	t-Statistic	Prob.
C	22.49965	0.609903	36.89055	0.0000
X4	0.021032	0.008422	2.497120	0.0133

Source : Eviews 12 results of data processing

For the labor force participation rate variable, the probability value in the t-statistic test is 0.0133, which is below the significance level of  $\alpha = 0.05$ . Therefore, it can be concluded that the null hypothesis (H0) is rejected, and the alternative hypothesis (H4) is accepted. This finding indicates that labor force participation rate has a positive and significant influence on economic growth in Asian countries.

e. Country Dummy

Table 9. t-test results on Dummy Variables

Variable s	Coefficient s	Std. Error	t- Statistic	Prob.
C	22.49965	0.609903	36.89055	0.0000
D	0.642028	0.317884	-2.019692	0.0447

Source : Eviews 12 results of data processing

The country dummy variable shows a probability value in the t-statistic test of 0.0447, which is below the significance level of  $\alpha = 0.05$ . Therefore, it can be concluded that the null hypothesis (H0) is rejected, and the alternative hypothesis (H5) is accepted. This finding indicates that there is a significant difference in economic growth between middle-income and high-income countries in the Asian region. Thus, middle-income countries tend to have lower economic growth compared to high-income countries in the Asian region.

*Simultaneous test (F-statistic)*

The F-statistic test is a method to evaluate whether the independent variables collectively influence the dependent variable. To determine whether this influence is significant or not, a comparison is made by considering the calculated F value and the F table. If the probability value of the F-Statistic is less than the significance level  $\alpha$ , in this case 5% or 0.05, then the alternative hypothesis (H6) is accepted. This indicates that the independent variables have a significant relationship simultaneously with the dependent variable and otherwise.

Table 10. F-statistic Results

F-Statistic	4.842461
Prob(F-statistic)	0.000323

Source : Eviews 12 results of data processing

Based on the results of the F-statistic test above, it can be seen that the probability value of the three tests above is smaller than the probability value of  $0.000323 < \alpha = 5\%$  or 0.05, so H6 is accepted, meaning that the independent variables (economic freedom, trade openness foreign direct investment, labor force participation rate, and country dummy) simultaneously have a significant effect on the dependent variable (economic growth) in middle-income and high-income countries in Asia.

*Coefficient of Detemination (R2)*

The coefficient of determination test or R-Square test is a statistical tool used to measure the extent to which the independent variables are able to explain variations in the dependent variable. Information about the coefficient of determination test can be found in the Adj. R-square value. The following are the results of the coefficient of determination for each country group in this study:

Table 11. Coefficient of Detemination results

R-Squared	0.746816
Adjusted R-Squared	0.800652

Source : Eviews 12 results of data processing

From the coefficient of determination test table presented, the country dummy variable shows an Adj. R-Square coefficient of 0.800652. This indicates that variables such as economic freedom, trade openness, foreign direct investment, labor force participation rate, and country dummy together are able to explain about 80% of the variation in economic growth, while the remaining 20% is attributed to other factors that are not covered by the variables in this study.

## **DISCUSSION**

### ***Effect of Economic Freedom on Economic Growth***

Based on the formulation of the panel data model involving the group of middle-income countries, the group of high-income countries in Asia, and country dummy variables, it can be concluded that in both groups, economic freedom has a positive but insignificant impact with a coefficient of 0.000475. This finding is in line with the results of previous studies which also show a positive but insignificant impact of economic freedom on economic growth. The previous relevant study was conducted by Elina & Setyadharma. Economic freedom reflects the quality of institutions and legitimacy that control the rate of economic growth, so its impact on economic growth may be related to its influence on the institutions that govern economic policy. This phenomenon may explain why the results of this study did not reach the expected level of significance, as differences in government systems and institutional quality in each country may be a factor affecting the results. In addition, the majority of high-income countries are categorized as "mostly free", while the majority of middle-income countries tend to fall into the "mostly unfree" category. These factors may be the main reason for the lack of significance in the relationship between economic freedom and economic growth in this geographical context.

### ***Effect of Trade Openness on Economic Growth***

From the panel data model equation involving the group of middle-income countries, the group of high-income countries in Asia, and country dummy variables, it can be concluded that in both groups, trade openness has a negative and significant effect with a coefficient of -0.001502. Several previous studies have reviewed the impact of trade openness on economic growth, showing negative and significant findings, as reviewed by previous studies by Zeno (2022), Rahman et al (2020), and Astuti (2020). This phenomenon is inconsistent with the principles that have been proposed by economists in the context of endogenous economic growth theory.

The negative correlation between trade openness and economic growth can be caused by factors such as exchange rate depreciation, large import volume, and negative trade balance position in each country. The negative relationship between trade openness and economic growth usually occurs especially in middle-income countries that are not fully prepared to face the challenges of global competition. Weak preparation and lack of anticipatory policies can make domestic industrial products less competitive compared to

foreign products (Astuti, 2020). In addition, an increase in the value of imports can also cause a deficit in the trade balance (Rahman et al., 2020).

**a. Effect of Foreign Direct Investment on Economic Growth**

Based on the panel data model equation involving middle-income country groups, high-income country groups in Asia, and country dummy variables, it can be identified that foreign direct investment has a positive and significant impact with a coefficient of 0.076475. Foreign Direct Investment (FDI) shows a positive and significant impact on economic growth, in line with the findings of previous studies that have been studied by Zeno (2022), Rahman, et al. (2020), Astuti (2020), and Hossain, et al. (2022).

Research related to this variable is consistent with the principles of the Harrod-Domar theory, which emphasizes that capital accumulation is considered a form of expenditure that can increase the capacity of the economy to produce goods and services, thus potentially encouraging economic growth. Aside from the theoretical framework described by Harrod-Domar (1939), the findings of this study are also in line with the principles of Neoclassical Theory. Neoclassical theory suggests that investment is recognized as one of the drivers of economic growth and development.

**b. Effect of Labor Force Participation Rate on Economic Growth**

Based on the panel data model equation covering the group of middle-income and high-income countries in Asia, along with country dummy variables, it can be seen that the labor force participation rate has a positive and significant effect on economic growth. The coefficient associated with this variable is 0.021032. Several previous studies have revealed the positive and significant impact of labor force participation rate on economic growth, as investigated by previous researchers by Zeno (2022), Misi (2022), and Amna Intisar, et al. (2020). This is consistent with the principles proposed by Adam Smith in Classical Theory. The theory observed that the role of human beings as the main factor of production plays a key role in determining the welfare of nations, and therefore, the existence of efficient human resources is considered a prerequisite for economic progress. Thus, labor force growth plays a central role in stimulating economic growth.

**c. Comparison of Economic Growth in Middle Income and High Income Asian Countries**

The results revealed disparities in economic growth between middle-income Asian countries, which include Bangladesh, Bhutan, India, Maldives, Nepal, Sri Lanka,

Pakistan, China, Mongolia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Palestine, Iraq, Lebanon, Turkey, Jordan, Iran, Cambodia, Philippines, Indonesia, Thailand, Timor Leste, Laos, Vietnam, Malaysia, and Myanmar, with high-income Asian countries, including Hong Kong, Macau, Taiwan, Japan, South Korea, Saudi Arabia, Bahrain, Kuwait, Oman, Qatar, United Arab Emirates, Israel, Cyprus, Brunei Darussalam, and Singapore. This can be seen from the t-statistic probability value of 0.0447 which is smaller than the significance of 0.05 with a coefficient value of 0.0642028, meaning that Asian countries that have middle income have lower economic growth compared to economic growth in Asian countries that have high income.

This research is in line with research conducted by Bla'zejowski, et al. (2019), which explored economic growth in middle-income and high-income countries. Economic growth is linked to factors such as geographic location and resource availability in a country. The key role lies in the country's ability to optimize the utilization of resources to generate production output. Countries that achieve rapid economic growth or continue to expand will not be trapped in the middle-income category. A study conducted by Eichengreen, et al. (2018) middle-income countries can increase their economic growth, in order to avoid the middle-income trap. Factors to escape the middle-income trap include rapid human resource growth, high investment, rapid total factor productivity and rapid capital growth.

According to Barro & Sala-i-Martin (1992) in Paprotny (2021), within the framework of convergence theory, derived from the neoclassical concept of economic growth, convergence refers to the efforts of poor or lagging regions to catch up, known as the catch-up effect. In this context, the economic growth of developing countries tends to be faster than developed countries. Developed, or high-income, countries tend to experience a steady state, where income has reached its maximum level and cannot increase further and otherwise. In this context, countries that are under development or just starting to develop have a greater interest in increasing their economic growth to catch up with high-income or developed countries.

## **CONCLUSIONS AND RECOMMENDATIONS**

1. This study shows that the Economic Freedom variable on Economic Growth has a positive and insignificant effect on middle-income and high-income countries in Asia.

2. This study shows that the variable Trade Openness on Economic Growth has a negative and significant effect on middle-income and high-income countries in Asia.
3. This study shows that the Foreign Direct Investment variable on Economic Growth has a positive and significant effect on middle-income and high-income countries in Asia.
4. This study shows that the variable Labor Force Participation Rate on Economic Growth has a positive and significant effect on middle-income and high-income countries in Asia.
5. This study shows that the dummy variable of middle-income and high-income countries there is a significant difference between economic growth in Asian middle-income countries and Asian high-income countries.
6. This study shows that the variables of Economic Freedom, Trade Openness, Foreign Direct Investment, Labor Force Participation Rate, and Country Dummy simultaneously affect economic growth in middle-income and high-income countries in Asia

#### **ADVANCED RESEARCH**

1. The researcher can add some additional variables beyond economic freedom, trade openness, foreign direct investment, and labor force participation rate that affect the rise and fall of economic growth.
2. In addition, it can use the latest time period to make it an accurate and informative study.
3. Can compare research sites outside Asian countries

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