
ANALYSIS OF THE EFFECT OF FOREIGN DIRECT INVESTMENT, GOVERNMENT SPENDING, AND EXPORTS ON ECONOMIC GROWTH ASEAN-5 COUNTRIES, 2005-2017

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Abstract

Foreign investment, exports, and government spending are some of the variables closely related to a country's development. This study aims to look at the relationship between foreign direct investment (FDI), export values, and government spending on economic growth in ASEAN-5 countries. These countries include Indonesia, Malaysia, the Philippines, Vietnam, and Singapore. The research method uses a quantitative approach with panel data analysis. The type of data is secondary data from the World Bank database from 2005 to 2017. The data is then tested through the Breusch and Pagan tests and the Hausman test. Finally, the data were analyzed using panel data regression analysis. The study result shows that FDI and exports have a positive but not significant effect on economic growth in ASEAN-5 countries. Meanwhile, the government expenditure variable has a positive and significant influence on the economic growth of ASEAN-5 countries. These results can also be used as a basis for policymakers on the volume of economic growth, especially in encouraging the quality of human resources to boost export value in ASEAN-5 countries.

Keywords: ASEAN-5; Economic growth; Exports; FDI; Government spending

JEL classification: B23, C23, O40

1. INTRODUCTION

There are various factors that can affect a country's economic growth. Economic growth itself is one of the indicators in assessing the economy of a country. The higher the value of economic growth, the more successful the country's economic development will be. This economic growth can also be interpreted as an increase in the production capacity of an economy. The production capacity that can be produced by a country depends on the capital it has. The greater the capital, the more production can be produced.

According to Adam Smith, economic growth is influenced by production factors. The factors in question are capital, labor, and technology. Meanwhile, in the Harrod-Domar theory, it is explained that capital must be used effectively in order to encourage economic growth for a country. According to this theory, capital can increase income for producers so that they can increase their production (Mankiw, 2007)

Capital is the main requirement for every country in financing development projects. One way to increase capital injections is by investing, in both domestic investment and foreign investment. Foreign Direct Investment (FDI) or foreign investment is believed to have a positive impact on economic growth, although some consider this foreign investment to affect a country's economic stability.

Apart from FDI, exports are also a factor that can affect economic growth. Export is the activity of selling goods and making shipments to other countries. With exports, productivity can also increase because apart from meeting domestic needs, producers must also provide goods or

services for export needs. In the long term, the production capacity of exporting countries will increase and will increase economic growth rates.

Government spending is also one of the factors that determine economic growth. According to Sukirno (2000) government spending is a component of aggregate demand because an increase in government spending will increase aggregate demand. In addition, government spending is also a way of determining the amount of government and government spending through fiscal policies. For this reason, researchers are interested in examining the influence of Foreign Direct Investment (FDI), Government Expenditure, and Exports on economic growth in ASEAN-5 countries which are considered capable of being samples from developing and developed countries in ASEAN.

2. RESEARCH METHOD

This study uses the variable economic growth or GDP as the dependent variable and uses Foreign Domestic Investment, Government Expenditures, and Exports as independent variables. These data are secondary data obtained from the web world bank.

The data used in this study is panel data, where panel data is a combination of time series and cross-section data. This study used data from 2005 – 2017 and used ASEAN-5 countries, namely Indonesia, Malaysia, the Philippines, Vietnam, and Singapore as cross-section data. The data used is attached in (Appendix 1).

To perform panel data processing, this study uses the STATA application. The version of the application used to process the data is STATA version 14.2.

There are three approaches that can be chosen to process panel data. Of the three approaches, it will be chosen which method is best used for the data you have? The three approaches are:

1. Common Effect Method (The Pooled OLS Method)
2. Fixed Effect Method (FEM)
3. Random Effect Method (REM)

The regression model used for panel data is as follows:

$$GDP = \alpha + \beta_1 FDI_{it} + \beta_2 EXP_{it} + \beta_3 GEX_{it} + \varepsilon$$

Description :

GDP	= Economic Growth
A	= Intercept Regression Equation / Constant
$\beta_1, \beta_2, \beta_3$	= Regression Coefficient
FDI	= Foreign Domestic Investment
EXP	= Export
GEX	= Government Spending
i	= 1, 2, ... n shows the cross section
t	= 1, 2, ... t indicates at a certain time
ε	= Errors

3. RESULTS AND DISCUSSION

3.1. Breusch and Pagan Test Results

Breusch and Pagan Lagrangian multiplier test for random effects

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lgdp[Code,t] = Xb + u[Code] + e[Code,t]

Estimated results:
-----+-----+-----
             |          Var          sd = sqrt(Var)
             +-----+-----+
    lgdp | .4185779          .646976
         e | .0019879          .0445862
         u | .0492527          .2219294

Test:   Var(u) = 0
            chibar2(01) = 237.91
            Prob > chibar2 = 0.0000
    
```

Figure 1. Breusch and Pagan Test Results

Based on the Breusch and Pagan test results above, we can see that the probability value of the model test is 0.00. This means that the more significant form of the model is the random effects (RE) model.

3.2. Hausman Test

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----- Coefficients -----
             |          (b)          (B)          (b-B)          sqrt(diag(V_b-
V_B))      |          fixed          random          Difference          S.E.
-----+-----+-----+-----+-----+
--
    lfdi | .0109588          .0114301          -.0004712          .
         lexp | .0666985          .0542262          .0124722          .0187617
         lgex | .7838961          .7937465          -.0098504          .02112
-----+-----+-----+-----+-----+
--
            b = consistent under Ho and Ha; obtained from
xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from
xtreg

Test:   Ho:   difference in coefficients not systematic

            chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                = 1.04
            Prob>chi2 = 0.7927
            (V_b-V_B is not positive definite)
    
```

Figure 2. Hausman Test Results

Based on the results of the Hausman test above, we can see that the probability value in the Hausman test is 0.7927. This figure shows that the better form of the model is the random effects (RE) model.

3.3. Interpretation of Panel Data Regression Results

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Random-effects GLS regression                    Number of obs   =       65

Group variable: Code                            Number of groups =
5

R-sq:
  within = 0.9560
  13
  between = 0.8843
  13.0
  overall = 0.8911
  13

1262.39
corr(u_i, X) = 0 (assumed)
0.0000

Wald chi2(3) =
Prob > chi2 =

-----
-----
+-----+
|lgdp |      Coef.   Std. Err.   z    P>|z|   [95% Conf. Interval]
+-----+
-----
      lfdi |   .0114301   .0088732    1.29  0.198   -.0059611
.0288212
      lexp |   .0542262   .0508333    1.07  0.286   -.0454053
.1538578
      lgex |   .7937465   .0522401   15.19  0.000    .6913579
.8961351
      _cons |   5.660859    .66569     8.50  0.000    4.35613
6.965587
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      sigma_u |   .22192941
      sigma_e |   .04458616
      rho    |   .96120409   (fraction of variance due to u_i)
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Figure 3. Interpretation of Panel Data Regression

Based on the results of the panel data regression test above, we can see that the overall R-squared value is 0.8911. This value indicates that the independent variables namely FDI, exports, and government spending can explain the dependent variable namely GDP of 89.11% and the rest is explained by variables outside the model.

Based on the coefficient value of the panel data regression above, the lfdi coefficient value is 0.0114301. This means that every 1% increase in FDI will increase GDP by 0.0114301%. However, this increase is not significant because the probability value is 0.198, and is above the value $\alpha > 0.05$. Then the lexp coefficient value is 0.0542262. This means that every 1% increase in exports will increase GDP by 0.0542262%. However, this increase is not significant because the probability value is 0.286, and is above the value $\alpha > 0.05$. Furthermore, the lgex coefficient value is 0.7937465. This means that every 1% increase in government spending will increase GDP by 0.7937465%. This increase is also significant because the probability value is 0.00, and is above the value $\alpha > 0.05$.

4. CONCLUSIONS

Based on the results of the research above, the conclusions that can be drawn include:

1. Foreign Direct Investment (FDI) has a positive but not significant impact on economic growth in ASEAN-5 countries. So if the amount of FDI increases, it can increase economic growth in ASEAN-5 countries. When there is an increase in FDI of 1%, it can increase economic growth by 0.0114301% or by 0.01%.

2. Exports have a positive but not significant effect on economic growth in ASEAN-5 countries. An increase in the value of exports in ASEAN-5 countries by 1% can affect an increase in economic growth by 0.0542262% or by 0.05%.
3. Government spending has a positive and significant influence on economic growth in ASEAN-5 countries. An increase in government spending by 1% will increase the economic growth of ASEAN-5 countries by 0.7937465% or 0.79%.

For the government as a policy maker, to increase growth, it is necessary to encourage the country's human resources to be able to compete with other countries. The government can also make policies to facilitate exports for SMEs so that they can help boost export levels and in the long term can increase economic growth. The government also needs to carry out business activities that can attract foreign investors to invest in their country. Increased investment is proven to be able to increase the economic growth of a country.

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