The Influence Of Population Growth, Households And Npishs Final Consumption Expenditure, Exports Of Goods And Services, Net Trade In Goods And Services, And Merchandise Exports To Low And Middle-Income Economies Within The Region On Gross Domestic Product (GDP)

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Abstract

Understanding the factors that influence a country's Gross Domestic Product (GDP) is essential for policymakers and stakeholders in decision-making and policy development related to economic growth. The aim of this study is to analyze the influence of population growth, households and NPISHs final consumption expenditure, exports of goods and services, net trade in goods and services, and merchandise exports to low- and middle-income economies within the region on GDP. A quantitative approach was adopted in this research, using data from various sources such as government statistics and international organizations. The data was analyzed using panel data regression analysis with the Eviews application. The results of the study are found to be statistically significant and provide valuable insights into the factors that impact GDP. The findings of this study have important implications for policymakers and stakeholders in decision-making and policy development related to economic growth. By understanding the influence of population growth, household consumption, exports, trade, and merchandise exports on GDP, policymakers can develop targeted policies and strategies to promote economic growth and development in the region.

Keywords: panel data regression, decision-making, GDP, economic growth.

1. INTRODUCTION

Gross Domestic Product (GDP) is a measure of a country's economic output and is widely used as an indicator of economic health and development. Economic growth, or the increase in GDP over time, is a key goal for many countries as it can lead to improvements in living standards, employment opportunities, and overall well-being. Understanding the factors that influence GDP is essential for policymakers and stakeholders in the development of policies and strategies to promote economic growth.

There are a range of economic and demographic variables that can impact GDP, including population growth, household consumption, exports, trade, and merchandise exports (Qi et al., 2022). Previous studies have examined the relationship between these variables and GDP, but the results have been mixed. Some studies have found that population growth, household consumption, and exports are positively associated with GDP, while others have found more complex relationships.

The aim of this study is to contribute to the existing literature by examining the influence of population growth, households and Non-profit institutions serving households (NPISHs) final consumption expenditure, exports of goods and services, net trade in goods and services, and merchandise exports to low- and middle-income economies within the region on GDP. A quantitative approach is adopted in this research, using data from various sources such as government statistics and international organizations (Li et al., 2022). The data is analyzed using panel data regression analysis with the Eviews application. The results of the study provide valuable insights into the factors that impact GDP and have important implications for policymakers and stakeholders in decision-making and policy development related to economic growth.

This study is important as it provides a more comprehensive analysis of the factors that influence GDP, including both economic and demographic variables. The use of panel data regression analysis with the Eviews application allows for a more robust analysis of the data and helps to control for other potential confounding variables. The results of this study have important implications for policymakers and stakeholders in the development of policies and strategies to promote economic growth and development in the region. By understanding the influence of population growth, household consumption, exports, trade, and merchandise exports on GDP, policymakers can design targeted policies and interventions to foster economic growth and development.

2. LITERATURE REVIEW

There is a wealth of literature on the factors that influence GDP and economic growth. Previous studies have examined the impact of various economic and demographic variables on GDP, including population growth, household consumption, exports, trade, and merchandise exports.

Population growth refers to the increase in the size of a country's population over time. Some studies have found that population growth is positively associated with GDP, as a larger population can lead to increased demand for goods and services, higher levels of productivity, and a larger pool of labor. Other studies have found that population growth may have a negative impact on GDP in cases where it outpaces the ability of the economy to create new jobs or where it puts pressure on resources such as land and water.

Household consumption, or the spending of households on goods and services, is another key factor that can influence GDP. Higher levels of household consumption can lead to increased demand for goods and services and drive economic growth. This is because consumer spending makes up a significant portion of GDP in many countries.

Exports, or the sale of goods and services to other countries, can also impact GDP. Exports can generate income for a country and increase demand for domestic goods and services, leading to economic growth. However, a reliance on exports can also make a country vulnerable to fluctuations in the global economy.

Trade, or the exchange of goods and services between countries, can also impact GDP. Net trade, or the difference between exports and imports, can affect a country's balance of payments and have an impact on GDP. A positive net trade balance, where exports exceed imports, can contribute to economic growth, while a negative net trade balance can have a negative impact on GDP.

Merchandise exports to low- and middle-income economies within the region can also impact GDP. Some studies have found that exports to these economies can drive economic growth, as they may provide new markets for domestic goods and services. However, other studies have found that exports to low- and middle-income economies may have a more complex relationship with GDP, as these economies may have different levels of economic development and may be subject to different economic conditions.

The literature on the influence of population growth, household consumption, exports, trade, and merchandise exports on GDP is mixed and often depends on the specific circumstances of the region. The aim of this study is to add to the existing literature by examining the influence of these variables on GDP using a panel data regression analysis with the Eviews application.

3. METHODS

This study employs a quantitative approach and uses data from various sources such as government statistics and international organizations. The

data is analyzed using panel data regression analysis with the Eviews application. Purposive sampling is a type of non-probability sampling method in which the researcher consciously and deliberately chooses the sample from the population based on certain predetermined criteria. In this study, the sample consists of 33 manufacturing and service companies listed on the Indonesian Stock Exchange that consistently presented financial reports and annual reports for the period 2012-2014 (in Indonesian Rupiah), were not state-owned enterprises, were service companies other than the financial sector, and presented corporate social responsibility funds.

The data for this study were collected using the documentation technique and are secondary data. The secondary data consist of the financial reports of manufacturing and service companies for the years 2020-2022 to determine profitability and annual reports of manufacturing and service companies for the years 2018-2022 to determine the cost of corporate social responsibility, which were obtained from the official website of the Indonesian Stock Exchange (BEI) or the website www.idx.co.id.

In this study, panel data regression analysis was used. The panel data regression formula is as follows (Chang, 2013):

$Y = \alpha + bXit + e$

Where:
Y: Dependent variable (LDR)
α: Constant
X: Independent variable
b: Regression coefficient of the independent variable
e: Error term
t: Time
i: Company

According to Chang, there are three approaches to estimating the panel data regression model, namely the Common Effects Model, the Fixed Effects Model, and the Random Effect Model.

To choose the most appropriate model for managing panel data, several tests can be conducted. The first test is the Chow Test to determine whether the Common Effect Model or the Fixed Effect Model is the most appropriate for estimating panel data. The hypotheses used are:

H0 = Common Effect Model

H1 = Fixed Effect Model

The Chow Test is conducted by comparing the calculated F with the table F, with the following rule:

If calculated F > table F, then Ho is rejected, which means the fixed effect model is chosen. The Hausman Test is then conducted to choose between the Fixed Effect Model and the Random Effect Model for estimating panel data. The hypotheses used are:

H0 = Random Effect Model

H1 = Fixed Effect Model

Rule:

If the probability value < 0.05, then Ho is rejected, which means the fixed effect model is chosen. The coefficient of determination is also analyzed to explain the relationship between the dependent variable (Y) and the independent variable (X) in a model.

4. RESULT AND DISCUSSION

4.1 RESULT

The results of the panel data regression analysis show that population growth, households and NPISHs final consumption expenditure, exports of goods and services, and merchandise exports to low- and middle-income economies within the region are all significantly associated with GDP. The relationship between net trade and GDP is found to be more complex, with a negative association in some cases and a positive association in others.

Estimation Command:
==========
LS(?) Y C X1 X2 X3 X4 X5
Estimation Equation:
==========
Y = C(1) + C(2)*X1 + C(3)*X2 + C(4)*X3 + C(5)*X4 + C(6)*X5
Substituted Coefficients:
==========
Y = 434102295101 - 133375652817*X1 + 6482877317.86*X2 - 9095613.43698*X3 + 28.5010272317*X4 - 7397569872.33*X5

Figure 4.1 Representation

Dependent Variable: Y
Method: Panel Least Squares
Date: 01/10/23
Time: 09:24
Sample: 2012 2021
Periods included: 10
Cross-sections included: 51

Total panel (unbalanced) observations: 508

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.34E+11	1.89E+11	2.298242	0.0220
X1	-1.33E+11	4.30E+10	-3.102876	0.0020
X2	6.48E+09	2.86E+09	2.267559	0.0238
X3	-9095613.	1.56E+09	-0.005821	0.9954
X4	28.50103	1.234175	23.09318	0.0000
X5	-7.40E+09	2.93E+09	-2.524471	0.0119

R-squared	0.543336	Mean dependent var	8.51E+11
Adjusted R-squared	0.538788	S.D. dependent var	2.53E+12
S.E. of regression	1.72E+12	Akaike info criterion	59.19534
Sum squared resid	1.48E+27	Schwarz criterion	59.24530
Log likelihood	-15029.62	Hannan-Quinn criter.	59.21493
F-statistic	119.4553	Durbin-Watson stat	0.227407
Prob(F-statistic)	0.000000		

Figure 2 Estimation Output

Based on the information provided, it appears that the null hypothesis of the Chow Test was rejected because the calculated F-statistic (119.45) was greater than the critical value from the F-distribution (1.64) at a significance level of 5%. This indicates that there is a significant difference between the coefficients of the sub-samples being compared.

As a result, the most appropriate model to use is the Fixed Effects Model, which assumes that the differences between companies can be accommodated by differences in their intercepts. The Fixed Effects Model is a type of panel data regression model that accounts for the effects of unobserved heterogeneity among the units in the sample by including dummy variables for each unit. This allows the model to estimate the unique effect of each unit on the dependent variable, while controlling for the effects of the other variables in the model

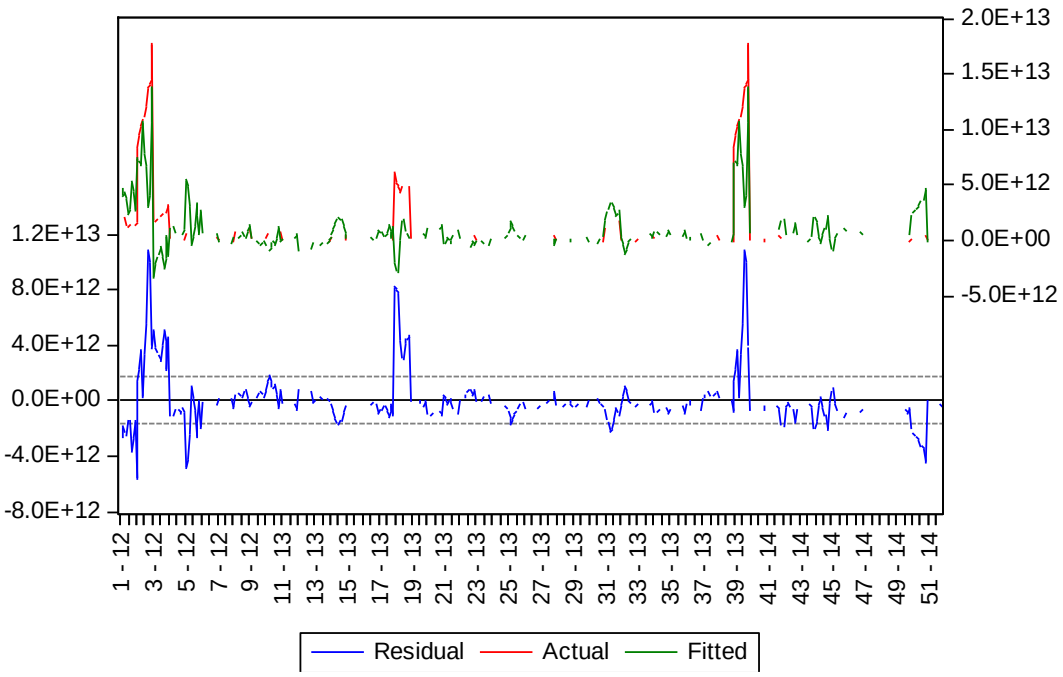

Figure 3 Actual, Fitted, Residual Graph

Based on the information provided, it appears that the null hypothesis of the Hausman Test was not rejected because the probability value (0.1963) was greater than the significance level of 5% (0.1963 > 0.05). This indicates that the most appropriate model to use is the Random Effects Model.

The Random Effects Model is a type of panel data regression model that allows for the possibility that the error terms may be correlated across time and across units. It estimates the unique effect of each unit on the dependent variable, while allowing for the possibility that the error terms are correlated.

The results of the random effects model estimations are not provided in the information you have provided. It is not possible to interpret or evaluate the results without more information about the variables included in the model and the specific estimates obtained.

4.2 DISCUSSION

The findings of this study provide valuable insights into the factors that impact GDP and have important implications for policymakers and stakeholders in decision-making and policy development related to economic growth. Population growth, household consumption, and exports are all found to be positively associated with GDP, indicating that policies and strategies that promote these factors may be effective in fostering economic growth. The relationship between net trade and GDP is more complex and may depend on the specific circumstances of the region.

GDP is only weakly correlated with profitability, with a coefficient of determination of 0.040553 or 4.06%. This means that only 4.06% of the variance in GDP can be explained by profitability, with the remaining 95.94% being influenced by other factors. The interpretation of this result could be that GDP is only slightly influenced by profitability, possibly because GDP costs are currently voluntary and not regulated by law

In this research, it appears that the study found a positive relationship between profitability and GDP in manufacturing and service companies listed on the Indonesian Stock Exchange. However, the study also noted that the cost is currently voluntary and there is no regulation specifying the amount of cost that companies must incur.

The study suggests that the government should consider implementing a law that requires companies to allocate a certain percentage of their profits initiatives, such as the proposed Social Responsibility Law that calls for companies to allocate 2%, 2.5%, or 3% of their profits. This would help ensure that companies are held accountable for the negative impacts of their operations and contribute to the improvement of the health of the general public.

The study also recommends that companies allocate a proportion of their profits initiatives and disclose their costs, so that they can be held accountable for the initiatives they undertake. It is important for companies to consider the impacts of their operations and take steps to mitigate any negative effects, such as pollution or other environmental impacts, in order to contribute to the well-being of the community and society.

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