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Factors supporting Indonesia's economic growth in 2004 – 2012

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ABSTRACT

In Indonesia, GDP growth in 2010 – 2012 continued to increase, despite the economic crisis in Europe. Therefore, to study Indonesia's economic growth, it can be observed from the factors that influence economic growth in Indonesia. The purpose of this study was to determine and analyze the effect of household consumption, the effect of state spending, the effect of values, the effect of export values and the effect of the Euro-rupiah exchange rate on Indonesia's economic growth in 2004-2012. The variables used in this study are gross domestic product (GDP), household consumption expenditures, government expenditures, investment, exports and imports of Indonesia. The dependent variable in this study is gross domestic product (Y), while the independent variable is household consumption expenditure (X1). From this study, it was found that household consumption had a significant positive effect on Indonesia's gross domestic product (GDP) in 2004 – 2012. The regression coefficient of the household consumption variable was 2.080 with a t-value of 2.341 > t-table (1.697) with a p-value = 0.026 < α = 0.05. Government expenditure has a significant positive effect on Indonesia's gross domestic product (GDP) in 2004 – 2012. The regression coefficient of the variable government expenditure is 1.237 with t count = 2.602 > t table (1.697) and p value = 0.014 <α = 0.05 .

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1. INTRODUCTION

Economic growth is an economic problem in the long term, and economic growth is an important phenomenon experienced by the world only in the last two centuries, and by Simon Kuznets, a leading economist in the United States who has won the Nobel Prize, it is stated that, the process of economic growth is called Modern Economic Growth. Basically, economic growth is defined as a process of growing output per capita in the long term. This means, that in the long term, welfare is reflected in an increase in per capita output which at the same time provides many alternatives in consuming goods and services, and is followed by increasing people's purchasing power.

Economic growth is also related to the process of increasing the production of goods and services in the economic activities of society. It can be said, that growth concerns the development of a single dimension and is measured by increased production and income. In this case, it means that there is an increase in national income as indicated by the value of the Gross Domestic Product (GDP). In 2010, there was a financial crisis in Europe. The financial crisis in several European countries has threatened the world economy. The crisis that hit the world was rooted in the failure of the European

Union to improve banking. In fact, European economies have not fully recovered from the 2007 crisis and have never fully dealt with all the challenges facing their banking system.

Europe's debt crisis originated in Greece, which then spread to Ireland and Portugal. These three countries have debts that are larger than their GDP, and also experienced a deficit (state expenditure was greater than GDP). The crisis began to be felt at the end of 2009, and was increasingly discussed in mid-2010. On May 2, 2010, the IMF finally approved a bailout package (loans) of € 110 billion for Greece, € 85 billion for Ireland and € 78 billion for Portugal. Then the fear of a crisis stopped for a moment.

Considering that Indonesia's economy is increasingly open, Indonesia is vulnerable to external shocks that have an impact on economic and social conditions in Indonesia. The impact of the European and US financial crises on the domestic financial sector, global economic conditions and price fluctuations which in turn had an impact on the domestic economy. One indicator of economic development is Indonesia's Gross Domestic Product (GDP), which tends to be positive and stable from 2007 to 2011.

The 2010 European Economic Crisis did not dampen the value of Indonesia's exports. Indonesia's total export value continued to increase from 2005-2012, but experienced a slight decrease in 2009, namely 14.96% compared to 2008. Total State Expenditure experienced an increase in 2005-2012, but experienced a decrease in contraction in 2009. The crisis that occurred in Europe in 2010 did not make state spending decrease, but there was a significant increase in state spending in 2011 of 30.23% compared to 2010.

Investment value in Indonesia from PMDN and FDI in 2010 – 2012 continues to increase. The economic crisis in Europe in 2010 did not discourage investors from investing in Indonesia. PMDN investment value in 2011 increased by 25.36% compared to 2010, while FDI increased by 20.11%. Household consumption in Indonesia has increased from 2005 – 2012. Household consumption in Indonesia in 2012 was IDR 604,139.00 per month, or an increase of 20.01% compared to 2010 when the economic crisis occurred in Europe.

The euro exchange rate against the rupiah fluctuated less sharply in the 2005-2012 period. The highest exchange rate of the euro against the rupiah was in 2008, which was almost Rp. 16,000.00. During the period 2010 – 2012, the euro exchange rate against the rupiah was relatively stable, which was in the range of IDR 11,321.00 to IDR 12,707.00 per 1 euro.

2. RESEARCH METHOD

By its nature, the data used in this study are quantitative data, namely GDP, household consumption and government spending, Indonesia's export and import data obtained from the Central Statistics Agency (BPS), the Investment Coordinating Board (BKPM) and Bank Indonesia (BI).). According to the source, the data used is secondary data which is time series data. In this study took data from 2004 - 2012.

The data collection method used is Documentation, by recording directly from the source in accordance with the necessary data taken from documents that have been issued and published by the relevant agencies. Based on previous research on GDP as the dependent variable conducted by Belinda Viyani Kartika (2012) and Ni Nyoman Yuliarni (2008) using multiple regression analysis to determine the effect of independent variables on GDP.

3. RESULTS AND DISCUSSIONS

Description of Research Variables

a. Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is the value of all goods and services produced by an economy in a certain period. Indonesia's Gross Domestic Product (GDP) in 2004 – 2012.

Table 1. Indonesia's Gross Domestic Product 2004 – 2012

Year	GDP (Trillion) Rp	Growth
2004	799.5	
2005	841.5	5.3%
2006	888.9	5.6%
2007	937,1	5.4%
2008	997,2	6.4%
2009	1041.4	4.4%
2010	1109.4	6.5%
2011	1180.7	6.4%
2012	1258,2	6.6%

b. Household consumption

Household consumption expenditure is the total market value of goods and services purchased by households and non-profit organizations. Indonesian Household Consumption Data for 2004 – 2012.

Table 2. Household Consumption in 2004 – 2012

Year	Household Consumption (Trillion) Rp	Growth
2004	72,4	
2005	79,2	9.9%
2006	83.6	5.0%
2007	90.3	8.0%
2008	95.5	5.8%
2009	101.5	6.3%
2010	107,8	6.2%
2011	116.0	7.7%
2012	125,1	7.8%

Household consumption is directly proportional to income. On a macro-aggregate basis, public consumption spending is directly proportional to national income. The greater the income, the greater the expenditure for consumption.

c. Government Spending

Government spending is measured from routine spending and development has a role and function that is quite large in supporting development goals in supporting government activities and increasing the scope and mission of services that are directly related to the formation of capital for the purpose of increasing production. Government Expenditure Data for 2004 – 2012.

Table 3. Government Expenditure in 2004 – 2012

Year	Government Spending (Trillion) Rp	Growth
2004	82.6	
2005	92.4	11.8%
2006	101.3	9.6%
2007	105.9	4.6%
2008	126.7	19.6%
2009	144.6	14.2%

2010	159.7	10.5%
2011	173.9	8.9%
2012	194.7	11.9%

Based on table 3 above, it can be seen that government expenditure has increased from 2004 – 2012. The occurrence of the global economic crisis in 2008 did not reduce Indonesia's spending consumption, it even increased by 19.6% compared to 2008.

d. Investment

Investment is an addition to the formation of capital which results in an increase in wealth. Investment is also a demand for goods and services thereby increasing income in the future. Data on Foreign Investment (PMA) and Domestic Investment (PMDN) for 2004 – 2012.

Table 4. Investment in Indonesia in 2004 – 2012

Year	Investment (Trillion) Rp	Growth
2004	90,1	
2005	95.6	6.1%
2006	105,3	10.1%
2007	116.9	11.0%
2008	126,4	8.2%
2009	137,6	8.8%
2010	146.9	6.7%
2011	164.6	12.1%
2012	187.9	14.2%

Based on table 4. above, it can be seen that investment in Indonesia has increased every year. The biggest investment increase in 2012 was 14.2% from 2011. The global economic crisis in 2008 and the European economic crisis in 2010 did not dampen investment in Indonesia, both foreign investment (PMA) and domestic investment (PMDN).

e. EUR/IDR Exchange Rate

The exchange rate is the price of a currency from a country that is measured or expressed in another currency. Exchange rates play an important role in spending decisions. Exchange rates allow us to translate prices from different countries into the same language. If all other conditions are held, the depreciation of a country's currency relative to all other currencies (an increase in the price of foreign exchange for that country) makes its exports cheaper and imports more expensive. Meanwhile, appreciation (a decrease in the price of foreign exchange in the country concerned) makes exports more expensive and imports cheaper. The euro exchange rate against the rupiah (EUR/IDR) in 2004 – 2012.

Table 5. Euro Exchange Rate against Rupiah (EUR/IDR) 2004 – 2012

Year	UIR/IDR exchange rate	Change
2004	12,300	
2005	12,266	-0.3%
2006	11,696	-4.6%
2007	13,280	13.5%
2008	14,796	11.4%
2009	14,542	-1.7%

2010	12,568	-13.6%
2011	11,982	-4.7%
2012	12,429	3.7%

Based on the table above, it can be seen that the exchange rate of the euro against the rupiah in 2004 – 2012 ranged from 12,300.50 to 12,429.50 rupiah per euro.

Multiple Regression Analysis

Multiple regression analysis is used to determine the effect of all independent variables on the dependent variable. Based on the results of calculations using the SPSS program, the results of multiple regression are obtained.

Table 6. Multiple Regression Equations

Model	*Unstandardized Coefficients*		t	Sig.
	B	Std Error		
Constant	-149,819	13,965	10,728	0.000
ln Consumption	2,080	0.888	2,341	0.026
Ln Shopping	1,237	0.475	2,602	0.014
ln Investment	0.891	0.324	2,749	0.010
Ln Export	1.127	0.521	2,161	0.039
Ln EUR/IDR	6,421	0.932	6,887	0.000
F count	= 89.548			
Sig. F	= 0.000			
R R2	= 0.968			
	= 0.937			

Classic assumption test

a. Multicollinearity Test

Multicollinearity test is used to determine whether there is a strong correlation between the independent variables included in the model formation. To detect whether the linear regression model has multicollinearity, it can be checked using the Variance Inflation Factor (VIF) for each independent variable, that is, if an independent variable has a VIF value > 10, it means that multicollinearity has occurred.

Table 7. Multicollinearity Test

Variable	tolerance	VIF	Results
Household consumption	0.251	3,990	Non Multicollinearity
government spending	0.211	4,749	Non Multicollinearity
Investment	0.219	4,561	Non Multicollinearity
Export	0.199	5,028	Non Multicollinearity
EUR/IDR exchange rate	0.756	1.324	Non Multicollinearity

Based on the table above, it can be seen that the Variance Influence Factor (VIF) value for each independent variable is <10.0. This shows that there are no symptoms of multicollinearity in the regression equation, meaning that there is no strong correlation between the independent variables.

b. Heteroscedasticity Test

Table 8. Heteroscedasticity Test

Model	Unstandardized Coefficients		t	Sig.
	B	Std Error		
Constant	-5,284	8,692	-0.608	0.548
ln Consumption	0.454	0.553	0.821	0.418
ln Expenditures	0.094	0.296	0.318	0.752
ln Investment	-0.207	0.202	-1.027	0.313
Ln Export	-0.019	0.325	-0.058	0.954
Ln EUR/IDR	-0.104	0.580	-0.180	0.858

Based on the table above it is known that the significance value (p value) for each independent variable is > α 0.05. This indicates that there are no heteroscedasticity symptoms in the resulting double regression equation.

c. Autocorrelation Test

Autocorrelation arises because successive observations over time are related to one another. To detect the presence or absence of autocorrelation, you can use the Durbin-Watson test (DW test). Based on calculations using SPSS, the calculated DW value is 1.969. For the number of samples (n) = 36 and the independent variable (k) = 5 at the significance level α = 0.05, the upper limit (du) = 1.799 and the lower limit (dl) = 1.175. Value 4 – du = 4 – 1.799 = 2.201. The calculated DW value of 1.969 lies between the values of 1.799 (du) and 2.201 (4 – du), which indicates that the resulting regression equation does not show signs of autocorrelation.

d. Normality test

To find out whether it is normal or not, a normality test is carried out, namely by graphic analysis. This graphical analysis uses a Histogram chart and a normal Probability Plot which compares the observed data with a distribution that is close to the normal distribution.

Coefficient of Determination

The coefficient of determination (R2) is the square of the multiple correlation value resulting from the regression equation. Based on the results of calculations using SPSS, the coefficient of determination (R2) = 0.937 is obtained. This shows that the large variation in Gross Domestic Product (GDP) which can be explained by the variables of household consumption, government spending, investment, exports and the EUR/IDR exchange rate is 93.70% and the remaining 6.30% is caused by other variables in outside of the five independent variables.

Discussion

a. Effect of Household Consumption on Gross Domestic Product

The regression coefficient of the household consumption variable is 2.080 with a t count of 2.341 > t table (1.697) with a p value = 0.026 < α = 0.05. Which means that the variable coefficient of household consumption = 2.080 and is positive which indicates that household consumption has a positive effect on GDP. If household consumption increases by 1% and other variables are held constant, GDP will increase by 2.080%. Household decisions greatly affect the overall behavior of the economy, both long and short term. in the long term consumption has a very large role in economic growth while in the short term consumption has a role in determining aggregate demand.

To keep consumption spending by households increasing, namely by increasing people's purchasing power and increasing people's productivity. If purchasing power decreases, the domestic industry is also threatened with bankruptcy. As stated by Keynes, namely the high participation of the people in consuming will increase output which will ultimately create jobs, and increase the level of economic development.

The effect of consumption means that there is use of the economy. Consumption here means spending by the public which is influenced by income. The greater the people's income, the greater the consumption, so that the circulation between consumption is balanced by saving, so there will be a balance in use and storage that affects income.

b. Effect of Government Spending on Gross Domestic Product

The regression coefficient of the government expenditure variable is 1.237 with t count = 2.602 > t table (1.697) and p value = 0.014 <α = 0.05. The variable coefficient of government expenditure = 1.237 and is positive which indicates that government spending has a positive effect on GDP. If the realization of government spending increases by 1% and the other variables remain the same, the GDP will increase by 1.237%.

Government spending from year to year always increases, as Musgrave and Rostow's theory states that the development of state spending is in line with the stage of economic development of a country. According to Wagner, based on observations from developed countries, it was concluded that in a country's economy, government spending will increase in line with the increase in the country's per capita income. The growth of Indonesian government spending from year to year has always increased. The increase in government expenditure is closely related to the increase in spending on personnel expenditure.

Government expenditures are budget funds issued by the government for state or regional needs. The APBN is divided into two, namely spending for spending and spending for financing. The factor that affects government spending is population. Growth in routine expenditure is significantly influenced by private investment, population and economic growth. While the factors that significantly influence the growth of development spending are also the population. Population is the factor that most influences government spending, especially on development spending.

With increasing economic growth, on the one hand, it will reduce routine spending and on the other hand, it will increase the growth of government development expenditures. The government has an important role in the economy for the welfare of the people. Government spending continues to grow in line with the stage of a country's economic development. In the early stages of economic development, large state expenditures are needed for government investment. Mainly for infrastructure such as roads, health, education etc. Wagner said based on observations from developed countries, it was concluded that in a country's economy, government spending would increase in line with the country's per capita increase.

c. Effect of Investment on Gross Domestic Product

The regression coefficient value of the investment variable on gross domestic product is 0.891 with t count = 2.749 > t table (1.697) and p value = 0.010 <α = 0.05. The coefficient of the investment variable = 0.891 and is positive which indicates that investment has a positive effect on GDP. If investment realization increases by 1% and other variables are constant, GDP will increase by 0.891%.

The influence of investment means the investment of assets. Whether it's in the form of money, savings, securities etc. Investment affects the growth of the country's economy, where investment is one way for the country to get a source of income. Who instilled this investment in the country?

Investors. Investors are people who invest in a concept that can provide progress and prosperity in the economy.

In economics it is explained that investment is the purchase of capital or goods that are not consumed, but are used for production activities so as to produce goods or services in the future. Formation of investment is done if people do not use all their income for consumption. but there are some that are saved. These savings are necessary for the formation of investments. Suppose investment in the construction of factories, roads, bridges, or educational investments in schools and universities. Investments issued directly can reduce unemployment and increase people's income which will ultimately increase public spending.

d. Effect of the EUR/IDR Exchange Rate on Gross Domestic Product

The regression coefficient value of the export variable on gross domestic product (GDP) is 2.161 > 1.697 (t table) with a p value of 0.039 <α = 0.05. This shows that exports have a significant positive effect on gross domestic product, indicated by the export variable coefficient = 1.127 and a positive value indicating that exports have a positive effect on GDP. If actual exports increase by 1% and other variables remain constant, GDP will increase by 1.127%.

The higher Indonesia's export structure is dominated by the export structure resulting from high import values, it will not affect Indonesia's gross domestic product (GDP). Export structures that can increase Indonesia's GDP are 1) Indonesian export commodities with a low content of imported components, with the capital power to produce them fully controlled by national investors, 2) Indonesian export commodities with low import components, but the capital to produce them is controlled wholly or partly by foreign investors, and 3) national export commodities with a high content of imported components, with the capital to produce them fully controlled by national investors.

4. CONCLUSION

Based on the results of data analysis and discussion in the previous chapter, it can be concluded that household consumption has a positive and significant effect on Indonesia's gross domestic product (GDP) in 2004 – 2012. With a coefficient value of 2.080. Government spending has a positive and significant effect on Indonesia's gross domestic product (GDP) in 2004–2012. With a coefficient value of 1.237 Investment has a positive and significant effect on Indonesia's gross domestic product (GDP) in 2004 – 2012. With a coefficient value of 0.891 Exports has a positive and significant effect on Indonesia's gross domestic product (GDP) in 2004 – 2012. With a coefficient value of 1.127 Euro Exchange Rate against the Rupiah (EUR/IDR) had a positive and significant effect on Indonesia's gross domestic product (GDP) in 2004 – 2012. With a coefficient value of 6.421.

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