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Analysis of the Influence of Economic Openness to Indonesia Growth

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***Abstract*—This study aims to explain economic growth in Indonesia. The variables that affect the rate of economic growth are government spending, domestic inflation difference, a difference of BI Rate and The Fed Rate, money supply, exchange rate, unemployment. In this study, the data used are secondary data published by the Central Bureau of Statistic and bank Indonesia. The data are annual data from 1991 to 2018. The analytical tools used are Ordinary Least Square regression. The results showed that government spending, exchange rates, and unemployment had no significant effect on economic growth in Indonesia, but the difference in domestic inflation & foreign inflation, the difference in domestic interest rates & Fed rate, Money supply significant economic growth in Indonesia.**

Keywords—Government Spending; Domestic Inflation Difference; Difference of BI Rate and The FED Rate; Money Supply; Exchange Rate; Economic Growth

I. INTRODUCTION

Economic growth is a major macroeconomic indicator for assessing the economic performance of a country. This economic growth in a country with an open economy can be calculated from a variety of aspects, both from the real sector and the financial sector, from production, consumption, and investment. Indonesia is one of the developing countries that has long implemented an open economic system. This is evident from the participation of Indonesia in some agreements free trade area or free trade agreement.

According to Mankiw (2006:114) that a country implementing economic openness policy will gain many positive benefits such as the formation of international relations, expansion of market share, improved modernization of technology and science, encouraging international capital flows and preventing a monopoly on global markets

Based on GDP data in Indonesia during 1991-2018 GDP rate in Indonesia showed fluctuating movement from year to year. The lowest GDP growth occurs in 1998 reaches minus 13.12 percent, this is dominant due to the increase in the world oil price and causes rising oil fuel prices. Indonesia's economic growth in 2000 amounted to 4.92 percent higher than the initial year forecast by Bank Indonesia for 3.0 percent up to 4.0 percent. In the year 2002 is getting better than the year 2001, based on GDP calculation constant price 2000, Indonesia's 2002 economic growth rate is 4.50 percent, and the rate of economic growth in 2001 amounted to 3.64 percent.

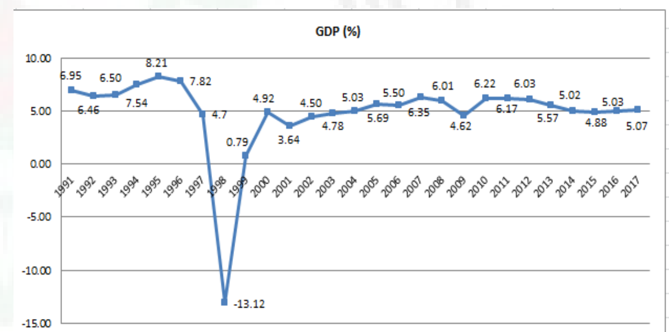


Fig I. GDP Growth in Indonesia years 1991-2018

Indonesia's economy demonstrates improved and more stable performance during 2003 as reflected in increased economic growth. Nevertheless, the economic growth that occurred is still insufficient to absorb additional labor force so that the amount of unemployment is still increasing. The still-sluggish world trade activity resulted in the growth of Indonesia's export volume, especially low non-oil commodities. In such situations, the export performance is nominally assisted by rising prices of oil and gas commodities in the international market so that the overall export value in 2003 is still experiencing a significant increase and is support The occurrence of surplus transactions running for 2003 (Bank Indonesia, 2003).

According to the Keynesian theory pioneered by Keynes that in short-term national output and employment opportunities are primarily determined by aggregate demand. The concepts of Keynesian demonstrate that the role of government is very large in creating economic growth. The market economy seems to be difficult to guarantee the availability of the goods needed by the community and often cause instability, inequity, and inefficiencies. If the economy is often faced with instability, inequality and inefficiencies

will inhibit the occurrence of economic growth in the long-term (Murni, 2006:183).

Government expenditure as one of the important instruments of fiscal policy is expected to encourage economic activity and increase economic growth. The government optimizes the role by increasing expenditure on GDP. Real government spending is also increasing in line with increased GDP. The government's role in the economy is shown by spending on economic fields in a percentage of total spending tends to increase.

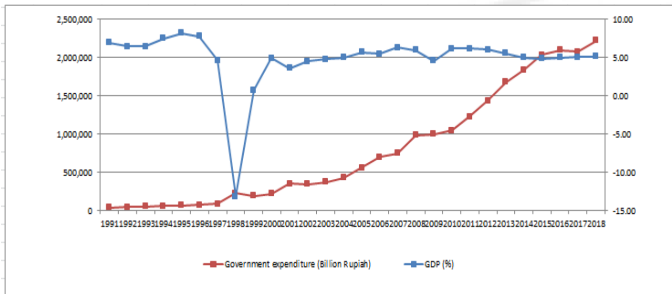
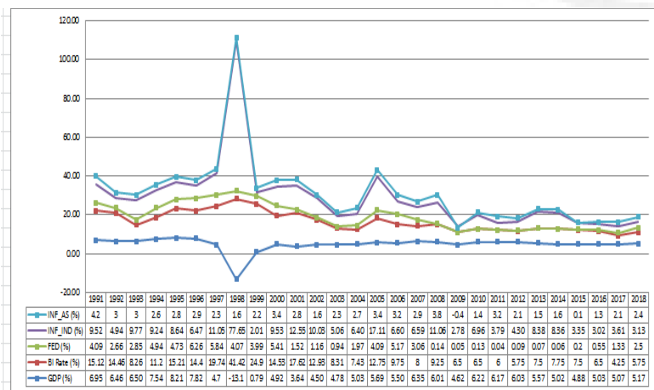


Fig II. Development of GDP growth and government expenditure in Indonesia years 1991-2018

According to Mankiw (2006), the difference in international and domestic interest rates is caused by two reasons, firstly, the country's risk reflected by political risk for lending to the state and second, the expected change in real exchange rates. The expectation that the currency will lose its value in the future will cause the currency to lose its current value. So that the domestic interest rate is determined by the world interest rate coupled with political risk. The view of Keynes of long-term rill interest rates IS influential in the economy and can be explained by the IS-LM scheme. With the sale of Bank Indonesia certificates, the amount of money supply will be reduced. The monetary policy that contractions leads to an increase in real interest rates due to the cost of capital to cause a decline in spending on investments that will eventually lead to decreased aggregate demand and decreased output.



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
INF_AS (%)	4.2	3	3	2.6	2.8	2.9	2.3	1.6	2.2	3.4	2.8	1.6	2.3	2.7	3.4	3.2	2.9	3.8	-0.4	1.4	3.2	2.1	1.5	1.6	0.1	1.3	2.1	2.4
INF_IND (%)	9.52	4.94	9.77	9.24	8.64	6.47	11.05	77.65	2.01	9.53	12.55	10.03	5.06	6.40	17.11	6.60	6.59	11.06	2.78	6.96	3.79	4.30	8.38	8.36	3.35	3.02	3.61	3.13
FED (%)	4.09	2.66	2.85	4.94	4.73	6.26	5.84	4.07	3.99	5.41	1.52	1.16	0.94	1.97	4.09	5.17	3.06	0.14	0.05	0.13	0.04	0.09	0.07	0.06	0.2	0.55	1.33	2.5
BI Rate (%)	15.12	14.46	8.26	11.2	15.21	14.4	19.74	41.42	24.9	14.53	17.62	12.93	8.31	7.43	12.75	9.75	8	9.25	6.5	6.5	6	5.75	7.5	7.75	7.5	6.5	4.25	5.75
GDP (%)	6.95	6.46	6.50	7.54	8.21	7.82	4.7	-13.1	0.79	4.92	3.64	4.50	4.78	5.03	5.69	5.50	6.35	6.01	4.62	6.22	6.17	6.03	5.57	5.02	4.88	5.03	5.07	5.17

Fig III. Development of GDP growth, BI Rate, FED Rate, inflation in Indonesia and inflation in the United States years 1991-2018

In Indonesia, short-term interest rates have increased from 8 percent in 2007 to 9.25 percent by 2008. Meanwhile, economic growth in Indonesia increased by 6.01 percent. The implementation of this monetary policy is to offset the rise of international interest rates to withstand the flow of outgoing capital to choose to be invested domestically. Besides aiming to strengthen the value of rupiah against the US dollar. The above does not match the view of Keynes

The cross-country economic crisis will trigger the domestic economic warming implemented by accelerating the high economic growth exceeding the limits of existing domestic capabilities, declining the trust of foreign investors as well as, that will strengthen the occurrence of capital flight so that it endangers domestic stabilization, especially at fluctuating rupiah exchange rate, as well as a decline in production activities of a number of industries that rely on imported raw materials.

The exchange rate is one of the important indicators that affect the stability of an economy. The difference in currency used by each country in export and import activities creates a difference in currency exchange rates. According to the Mundell-Fleming theory (Mankiw, 2006) stating that there is a negative relationship between the exchange rate with economic growth, the higher the exchange rate then the net exports are getting lower. This decline will have an impact on the amount of output being reduced and will cause GDP to decline

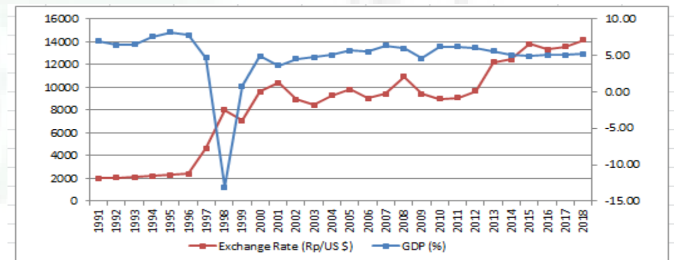


Fig IV. Development of GDP growth and exchange rate years 1991-2018

Indonesia has experienced a crisis in the rupiah exchange rate against the US dollar that experienced overshooting quite far from its real value. This prolonged crisis is a Theravada crisis of very sharp rupiah exchange rate. Since the end of 2008, the deeper global crisis has made the effect of depreciation on the currency.

According to the theory of money quantity that the more turnover money is done then it will increase the economic growth of a country (Karim, 2008). The addition of money supply can lower interest rates. When the interest rate decreases it will encourage rising investment activities in a country. Investment activities are increasing then will need Labor also to meet the increasing number of output the demand for labor increases will reduce the unemployment rate of the community. Increasing the demand for Labour will improve the public's income to a prosperous life so that it will implicate economic growth in a country.

Each year the amount of money supply has increased, from 2002 until 2004 the increase in the amount of money circulating not more than 10 percent while the economic growth is above 4.10 percent. It can be said that the growth in

the amount of money supply responds positively to economic growth

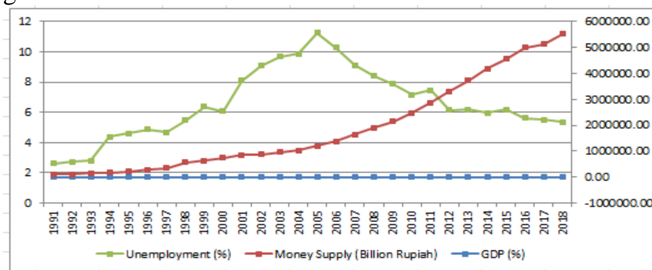


Fig V. Development of GDP growth, money supply and unemployment years 1991-2018

The year 2004 economic growth in Indonesia amounted to 5.03 percent and in 2005 its economic growth experienced an insignificant increase of 5.69 percent. However, judging by the level of unemployment data in Indonesia that year has experienced a significant increase in the year 2004 to 2005 of the unemployment rate of 9.86 percent increased by 11.24 percent.

In general, this research examines the influence of economic openness to economic growth in Indonesia. The variables that affect the rate of economic growth (GDP) are government spending (GOV), domestic inflation difference (INF_IND) & INF_AS), a difference of BI Rate and The Fed Rate (BI Rate & FED), money supply (MS), the exchange rate (EC), unemployment (Unemp).

II. Method

The study used secondary data in the form of time series during the year 1991-2018. Calculation of the inflation rate in this study uses the CPI inflation concept obtained from the Central Bureau of Statistic and Bank Indonesia. BI Rate and FED Rate in percent, rupiah exchange rate against US $ using the central exchange rate stipulated by Bank Indonesia in the thousands of rupiah acquired by Bank Indonesia. The data on the amount of money supply used is money in the broad meaning (M2) in units of billions of rupiah sourced from Bank Indonesia. Unemployment and GDP in Indonesia in the percentage acquired by Bank Indonesia.

The data analysis techniques used in this study are the descriptive analysis and analysis of Ordinary Least Square models (OLS) with the help of the Eview 9 program.

III. Results and Discussion

Regression model about the influence of economic growth (GDP), government spending (GOV), domestic inflation difference (INF_IND) & INF_AS), difference of BI Rate and The Fed Rate (BI Rate & FED), money supply (MS), exchange rate (EC), unemployment (Unemp) in Indonesia use multiple linear regression method, Ordinary Least Square models (OLS). Equation of multiple linear regression model can be seen as follows:

$$GDP = \alpha_0 + \alpha_1\, LNGOV_t + \alpha_2\, INF_IND\ \&\ INF_AS_t + \alpha_3\, BI\ Rate\ \&\ FED_t + \alpha_4\, MS_t + \alpha_5\, EXC_t + \alpha_6\, Unemp_t + \varepsilon_t$$

$$GDP = 24.88352 + 0.19773\, LNGOV_t + 0.134195\, INF_IND\ \&\ INF_AS_t - 0.267757\, BI\ Rate\ \&\ FED_t + 0.126465\, MS_t - 2.066319\, EXC_t + 0.150087\, Unemp_t + \varepsilon_t$$

TABLE I. RESULT OF ORDINARY LEAST SQUARE

Dependent Variable: GDP
Method: Least Squares
Date: 08/22/19 Time: 01:44
Sample: 1991 2018
Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGOV	0.197773	1.506077	0.131317	0.8968
INFDN_INFLN	0.134195	0.030423	4.410895	0.0002
SBI_FEDRATE	-0.267757	0.074344	-3.601581	0.0017
LNMS	0.126465	1.733061	4.072972	0.0425
LNEXC	-2.066319	1.379263	-1.498132	0.1490
UNEMP	0.150087	0.150037	1.000334	0.3285
C	24.88352	4.276940	5.818066	0.0000

R-squared	0.929881	Mean dependent var	4.858929
Adjusted R-squared	0.909847	S.D. dependent var	3.793974
S.E. of regression	1.139158	Akaike info criterion	3.310773
Sum squared resid	27.25129	Schwarz criterion	3.643824
Log likelihood	-39.35083	Hannan-Quinn criter.	3.412590
F-statistic	46.41528	Durbin-Watson stat	2.081643
Prob(F-statistic)	0.000000		

Based on analysis regression result can be seen that government spending (GOV) has not directly significant influence on economic growth (GDP) in Indonesia with coefficient 0.197773. This research has not a relationship between government expenditure and economic growth in Indonesia, meaning the higher the value of government spending then the economic growth will decline. Similarly, when government expenditure drops, economic growth will increase. This is demonstrated by decreased Government spending in 2013 and economic growth in Indonesia. So it can be stated that influential government expenditure is not significant and has a negative relationship to economic growth. As it is known that the average government expenditure in each year has increased and decreased. The economic crisis of the year 2009 impacted the government's budget Areas in Indonesia, so that year the amount of government expenditure is very small compared to other periods in this study. This study supported consistently on research conducted by Hutabarat (2014) stating that government spending has no effect on economic growth with any level of trust.

Based on analysis regression result can be seen that domestic inflation difference (INF_IND) & INF_AS) has directly significant influence on economic growth (GDP) in Indonesia with coefficient 0.134195. So the research is supported by the theory presented by Sukirno (2008:11) Where economic policies, especially the monetary policy of a country, strive to keep inflation at the slither level of inflation. Inflation can cause good effects in Economy. The company's profits increase and will promote investment. So employment and income opportunities increase and encourage economic growth. According to Bick (2010) in Threshold Effect of

Inflation on Economic Growth in Developing Countries, states that there is a significant relationship between inflation and economic growth. So the results of the research conducted by Bick (2010) show similar results with this study that Shows that inflation has a positive influence on economic growth

Based on analysis regression result can be seen that difference of BI Rate and The Fed Rate (BI Rate & FED) has directly significant influence to economic growth (GDP) in Indonesia with coefficient -0.267757. According to the Keynesian view where long-term rill interest rates are most influential in the economy and can be explained by the IS-LM scheme. Increased stock of money will lower the real interest rate and capital costs and increase business investment. Increased investment will eventually increase aggregate output. Decreasing the real interest rate will lower the cost of capital and the cost of holding money, then stimulate business and consumer spending. Increased business and consumer spending will ultimately increase aggregate demand (Mishkin, 2009:604). Ascarya (2014) stated that estimation results of ECM, ARDL, and VECM show that under the dual financial system, the increase of SBI tends to increase inflation and tends to decrease economic growth, while the increase of SBIS gives insignificant impact to inflation and economic growth.

Based on analysis regression result can be seen that money supply (MS) has directly significant influence on economic growth (GDP) in Indonesia with coefficient 0.126465. It corresponds to the theory of money quantity that the more turnover money is done then it will increase the economic growth of a country (Karim, 2008). The addition of money supply can lower interest rates. When the interest rate decreases it will encourage rising investment activities in a country. Investment activities are increasing then will need Labor also to meet the increasing number of outputs, the demand for labor increases will reduce the unemployment rate of the community. Increasing the demand for Labour will improve the income of people to a prosperous life so that it will implicate economic growth in a country.

Based on analysis regression result can be seen that the exchange rate (EC) has not directly significant influence on economic growth (GDP) in Indonesia with coefficient -2.066319. Levy-Yeyati and Sturzenegger (2003) stated that compare the performance of the economy using fixed, intermediate, and floating exchange rate regimes. His studies show that countries developing that adheres to exchange rate regime fixed its economic growth slower. Yet for advanced countries, its influence looks insignificant.

Based on analysis regression result can be seen that unemployment (Unemp) has not directly significant influence on economic growth (GDP) in Indonesia with coefficient 0.1500087. Based on the empirical data on unemployment and economic growth in 1991-2018, unemployment is always not comparable to the economic growth in Indonesia where unemployment rises then economic growth decreases. This is because economic growth in Indonesia has not created employment that can reduce the amount of unemployment. The unemployment rate is influenced by the growth of the workforce and the amount of unemployment that has existed from the previous year. This research is not following with the law of Okun's which states that when the unemployment rate increases then productivity will decline and the output gained by the state will also decrease so that economic growth will decrease (Mankiw,2006).

IV. Conclusion and Recommendations

Only variables of the inflation difference in Indonesian inflation & the United States, the difference between BI Rate & FED Rate and the amount of money supply that has a significant influence on economic growth in Indonesia. Government spending variables, exchange rates, and unemployment have no significant influence on economic growth in Indonesia

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