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AGGREGATE DEMAND, NAIRU AND ECONOMIC GROWTH IN INDONESIA

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ABSTRACT

This study aims to determine the effect of aggregate demand on economic growth either directly or indirectly through NAIRU in Indonesia. The analysis model used in this research is path analysis, using time series data for the period 1997-2021. As for the results of the study, namely investment directly has a negative and insignificant effect on economic growth and indirectly has a negative and significant effect through NAIRU. Consumption directly has a positive and insignificant effect on economic growth and indirectly has a negative and significant effect through NAIRU. Government spending directly has a positive and insignificant effect on economic growth and indirectly has a positive and significant effect through NAIRU.

1. INTRODUCTION

Economic growth is one of the long-term issues that must be addressed by every country. Where it is hoped that rapid economic growth will occur. Although many studies have discussed economic growth, growth is still one of the global problems that cannot be solved until now. Economic growth is also an important phenomenon experienced by the world since the last century. In that period the world has experienced a very real change compared to the previous period. Economic growth can also be interpreted as a process of increasing the production capacity of an economy which is manifested in the form of an increase in national income.

The general description of economic performance in a country can be seen from the macroeconomic conditions of a country, where each country expects stable economic conditions. Economic stability will lead to conditions where national output grows steadily, with low inflation and full utilization of labor resources.(Case et al., 2014).The government through its policies seeks to create stable economic conditions with low price increases and is able to absorb the maximum workforce.

Indonesia's economic growth over the past 10 years has experienced a downward trend. This condition was exacerbated in 2020 due to the spread of the Covid-19 pandemic. In 2020 Indonesia's economic growth contracted by -2.07%. In order to maintain macroeconomic stability, the government in each country can intervene. This is based on Keynes's thoughts quoted from Deliarnov (2010) regarding the role of government in the economy which states that government intervention is a must, especially if the economy is not running as expected. When there is unemployment, the government can increase its spending on labor-intensive projects. That way, unemployed people can have jobs and increase people's income.(Juneldi & Sentosa, 2022).

According to economic theory, in estimating the natural rate of unemployment accompanied by stable prices and wage rate dynamics, one approach is the Non-Accelerating Inflation Rate of Unemployment (NAIRU). This condition is also sometimes referred to as long-term or structural unemployment. The term Non-Accelerating Inflation Rate of Unemployment (NAIRU) was first introduced by economists Friedman (1968) and Phelp (1967) which is a component of the Phillips Curve. NAIRU is a modern inflation theory where if the unemployment rate is low, it is not followed by high inflation. This corresponds to the unemployment rate where workers and market products are in a state of inflation equilibrium.

Theoretically, NAIRU can cause three level conditions, namely if the unemployment rate is below the NAIRU level then inflation will increase or inflation will be higher than expected inflation. If the unemployment rate is above the NAIRU level then inflation will decrease. And if the unemployment rate is the same as the NAIRU level then inflation will be stable or equal to expected inflation. So if the unemployment rate is maintained at a low level in the next period, inflation will need to be higher by keeping the unemployment rate below NAIRU. Vice versa, if inflation decreases it occurs when the unemployment rate is maintained above NAIRU. For this reason, if the government tries to reduce the unemployment rate below the NAIRU level, it will cause inflation to increase. so that workers and companies expect higher inflation. Increased inflation expectations were caused by high inflation expectations. Increased expectations of inflation over a long period of time will slow down the economy, so that a contraction in economic activity will bring output back to its original potential and the unemployment rate back to a reasonable level. Thus, in NAIRU theory, reducing the number of unemployed can be done without an increase in inflation by keeping unemployment at the same level as NAIRU. so that a contraction in economic activity will bring output back to its original potential and the unemployment rate back to a reasonable level. Thus, in NAIRU theory, reducing the number of unemployed can be done without an increase in inflation by keeping unemployment at the same level as NAIRU. so that a contraction in economic activity will bring output back to its original potential and the unemployment rate back to a reasonable level. Thus, in NAIRU theory, reducing the number of unemployed can be done without an increase in inflation by keeping unemployment at the same level as NAIRU.

According to King and Morley (2007) in(Alfaris Kurniawan, 2021) explains that the natural rate of unemployment is the long-run equilibrium in the labor market. Economists think that this natural rate of unemployment can serve as a proxy for the broader macroeconomic equilibrium. The NAIRU measurement is a controversial measurement because it can only be estimated and there is no exact size. NAIRU can be said to be an approximation of a constant value (does not change over time) or a value that varies (time varying NAIRU). However, if one observes that the economy that occurs is an economy that is not static but dynamics occur within its components, then NAIRU can be said to be an estimation of a value that changes over time (time varying NAIRU) as a reflection of the economy at a certain time. This is in line with(Elkayam & Ilek, 2016) and(Dawn, 2017)stated that the NAIRU forecast is not constant but moves (time varying NAIRU) and its development is in line with the low-frequency dynamics of the actual unemployment rate, where in certain periods the NAIRU moves above the open unemployment rate or moves below the NAIRU which reflects the current economic dynamics.

According to Friedman and Phelps (1968) there is no long-term trade off between inflation and unemployment, in the long run unemployment depends on structural variables, while inflation is a monetary phenomenon. There is a trade off between unemployment and inflation in the short run indicating that if unemployment falls below the NAIRU, inflation will rise until the unemployment rate returns to NAIRU. Therefore, the existence of NAIRU has direct implications for the implementation of economic analysis and policy(Shaheen et al., 2011).

As for research on inflation and unemployment rates in other countries(Daniel et al., 2021)found that there is no long-run relationship between inflation and unemployment in Nigeria. The problems of inflation and unemployment arise from inefficiencies in both monetary and fiscal policies. Next(Ramzan, 2021) which states that there is no two-way relationship between inflation and unemployment rate in the case of Pakistan. Inflation and unemployment are far from equilibrium values.

Several factors that influence economic growth are investment, consumption, government spending and exports/imports. According to Sukirno (2004) the calculation of GDP by way of expenditure differentiates the expenditure of goods and services produced in an economy into four components, namely, household consumption, government spending, investment, and net exports (export-import). Thus, GDP growth will be greatly influenced by these four components(Padli et al, 2020).

For this reason, based on the description above, the authors draw research objectives to analyze and find out clearly related to the influence of aggregate demand (investment, consumption, government spending and exports) on economic growth both directly and indirectly through NAIRU in Indonesia.

2. METHODS

The data analysis model used in this research is path analysis. The type of data in this study is secondary data which is time series in annual form, namely from 1997-2021.The structural functional model is as follows:

$Y_1 = f(X_1, X_2, X_3, X_4)$…………………………………………………..…(4.1)
$Y_2 = f(X_1, X_2, X_3, X_4, Y_1)$………………………………………………………………..(4.2)

note:
Y_1 =Unemployment (NAIRU)
Y_2 =Economic growth
X_1 =FDI
X_2 =Consumption

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X_3 =Government Spending
X_4 =Net Exports

$$Y_2 = \lambda 0 + \lambda_1 LnX_1 + \lambda_2 LnX_2 + \lambda_3 LnX_3 + \lambda_4 LnX_4 + v$$

3. RESULT AND DISCUSSION

Following are the output data results of direct and indirect influences between variables.

Table 1 Influence Between Variables

Variable Relations	Coefficient	t count	probability	Information
Ln_X1→Y1	-1,285	-3,839	0.00	Significant
Ln_X2→Y1	-8,598	-6,610	0.00	Significant
Ln_X3 →Y1	3,121	5,761	0.00	Significant
Ln_X4→Y1	0.083	0.572	0.57	Not significant
Ln_X1→Y2	-0.048	-0.090	0.92	Not significant
Ln_X2→Y2	1,345	0.482	0.63	Not significant
Ln_X3→Y2	0.160	0.151	0.88	Not significant
Ln_X4→Y1	-0.404	-2,278	0.03	Significant
Y1 → Y2	0.799	2,976	0.00	Significant

Table 2 Indirect Effect Between Independent Variables on Dependent Variables

Variable Relations	Coefficient	tcount	probability	Information
X1 → Y1→ Y2	-1,027	-2,325	0.00	Significant
X2 → Y1→ Y2	-6,870	-2,714	0.00	Significant
X3 → Y1→ Y2	2,494	2,644	0.00	Significant
X4 → Y1→ Y2	0.066	0.562	0.28	Not significant

The Effect of FDI on Economic Growth

The direct influence of Foreign Investment (PMA) on economic growth in 1997-2021 is indicated by a coefficient of -0.048, with a significance of 0.92 > 0.05. While the indirect effect of FDI on economic growth through NAIRU shows a coefficient value of -1.027 with a significance of 0.00 <0.05.

Foreign Investment (PMA) has a negative coefficient on the direct and indirect influence through NAIRU on economic growth. The results of this study indicate that there is a negative relationship between FDI and economic growth. This is not in accordance with the multiplier theory, namely Keynes stated that an increase in the amount of investment will expand the output and use of labor. This explains the relationship between investment and economic growth, where when investment increases, a country's economic growth will also increase. This is due to the impact of the Covid-19 pandemic. The Covid-19 pandemic has had a sizable impact on investment.

FDI is not significant to economic growth due to licensing which is not easy and lengthy for foreign investors, and the low skills of the workforce which of course can affect productivity. The results of this study are in line with research(Jufrida et al., 2016)which states that foreign investment/PMA has no significant effect on economic growth. Foreign investment is generally carried out by a company or individual in the business world which is basically to gain profit not only in the present but also in the future in the area. But with easy licensing and through NAIRU and economic stability it is hoped that it can make a major contribution in increasing economic growth. This is explained in Horrod Domar's investment theory which explains that the easier the investment process is, the more investment activities are carried out with so many industries being established that can absorb a large number of workers, and the higher the income generated by the state.

The Effect of Consumption on Economic Growth

The direct effect of consumption on economic growth in 1997-2021 is shown by a coefficient of 1.345 with a significance of 0.63 > 0.05. This means that consumption has a positive but not significant effect on economic growth in Indonesia during the 1997-2021 study period. Meanwhile, the indirect effect of consumption on economic growth through NAIRU shows a coefficient value of -6.870 with a significance of 0.00 <0.05, which means that consumption has a negative but significant effect on economic growth through NAIRU in Indonesia during the period 1997-2021.

Consumption has no significant effect on economic growth, which can be caused by a decrease in people's income which results in people's purchasing power decreasing for the goods needed, both in the form of food and non-food, this can affect people's consumption patterns.This is in accordance with the theory put forward by Keynes which states that an important factor determining the level of consumption and saving is income. This research is in line with(Husin, 2022)which states that household consumption has no significant effect on economic growth. This is due to the contribution of other sectors to the economy which is much more increased. So it's no wonder the contribution of this sector is slower. But if this consumption is accompanied by NAIRU, where if unemployment is with a stable level of economic stability, it can increase economic growth.

Effect of Government Spending on Economic Growth

Influencegovernment spendingdirectly on economic growth in 1997-2021 is indicated by a coefficient of 0.160 with a significance of 0.88 > 0.05. This means that government spending has a positive and insignificant effect on economic growth in Indonesia during the 1997-2021 study period. Meanwhile, the indirect effect of government spending on economic growth through NAIRU shows a coefficient value of 2.494 with a significance of 0.00 <0.05. This means that government spending has had a positive and significant effect on economic growth through NAIRU in Indonesia during the 1997-2021 period.

Government expenditure has a positive coefficient, which means that any increase in government expenditure will affect economic growth. This is in accordance with the theory stated by Keynes, that government spending will have an impact on the domestic economy, and supports Warner's law which says that any funds issued by the government in spending can actually encourage economic growth.

The insignificant effect of government spending on economic growth can be due to the fact that fiscal policy is still a mainstay in supporting economic growth in Indonesia. However, its role in Indonesia is still not so obvious. The contribution of government spending to Gross Domestic Product (GDP), for example, is no more than 10%, this is very low compared to other developing countries. The non-optimal role of the government in promoting economic growth stems from problems on the income and spending side. Tax revenue targets, which are the main source of state revenue, have not been realized optimally, and have even tended to slow down. This goes along with(Ganar et al., 2021)which states that government spending is not significant to economic growth. This means that the budget allocation for government spending is still not efficient, so it cannot encourage economic growth. But if the realization of government spending is realized optimally and through an efficient and stable NAIRU it can boost economic growth.

Effect of Net Exports on Economic Growth

The direct effect of net exports on economic growth in 1997-2021 is shown by a coefficient of -0.404 with a significance of 0.03 <0.05. Meanwhile, the indirect effect of net exports on economic growth through NAIRU shows a coefficient value of 0.066 with a significance of 0.28 > 0.05.

Net exports have a negative direct effect coefficient indicating that there is a non-unidirectional relationship between net exports and economic growth, that is, if exports increase, economic growth will also increase. This is not in accordance with the theory put forward by Mankiw, where he stated that when productivity increases, the goods produced will increase as well as exports, when exports increase, economic growth also increases.

The indirect effect of exports on economic growth through NAIRU has a positive but not significant relationship. The insignificant net exports through NAIRU can be explained because there is economic transmission that is quite far between exports and the number of existing unemployed, to affect the number of unemployed other variables such as production levels or domestic output that can meet capacity so that an increase in new output can increase the demand for labor, but export goods do not necessarily require a large number of workers so that it will not affect the existing unemployment rate.

Based on the estimation results, net exports have an effect on economic growth. The results of this study are in line with the results of research conducted by(Zulzilah et al., 2022)which states that exports have a significant effect on economic growth. Exports have several functions for the country, which can provide many benefits for the countries involved such as meeting the needs of these countries, both goods and services that cannot be produced domestically, expanding the reach of local product markets, increasing the scale of production in local companies, and increased employment.

4. CONCLUSION

Based on the research results obtained, it can be concluded that foreign direct investment (PMA) has a negative and insignificant direct effect on economic growth. Meanwhile, Foreign Investment (PMA) indirectly has a negative but significant effect on economic growth through NAIRU. Consumption directly has a positive but not significant effect on economic growth. Meanwhile, indirectly consumption has a negative but significant effect on economic growth through NAIRU. Government spending directly or indirectly has a positive effect on economic growth through NAIRU. Net exports have a direct and significant negative effect on economic growth. However, exports indirectly have a positive and insignificant effect on economic growth through NAIRU. In increasing economic growth and maintaining economic stability, it is necessary to manage investment allocation expenditures as well as possible and strive for effective investment policies so that the allocation of funds to investment does not have a negative impact on GDP so that future economic growth can grow and increase, the budget for expenditure the government is allocated optimally and on target, and is expected to stimulate its people to export in order to increase income and increase economic growth, by refocusing products from raw materials to semi-finished products or finished products, encouraging service exports and expanding export markets,

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