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The Role of Technology Investment, Business Sector Investment, Government Investment in Public Goods and Consumption in Efforts to Improve Population Welfare in Indonesia

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Abstract

This research is about technology investment, business sector investment, government investment in public goods and consumption in an effort to improve the welfare of the population in Indonesia, which is reflected in the Gross Domestic Product. This study uses secondary data from world banks and processed regression using the moving average autoregression method. We find that government consumption and investment are positively related to gross domestic product, so it can be concluded that government investment in public goods and public consumption is a driving factor for the welfare of the Indonesian people. This shows that the informal business sector which is not touched by business sector investment, either FDI or direct investment or paper asset investment, needs to be strengthened by buying umkm products and informal sector products because the Indonesian economy relies on the informal sector.

Keywords: Investment, Indonesia, Consumption
JEL Classification : C0, J24,J64

Background

Indonesia is a country with a sizeable population. This large population is a very valuable asset in the form of abundant human resources and high consumption. Consumption occurs because of the absorption of products in the domestic market by the population or population. Consumption occurs due to the use of indigo for production by the population so that economic transactions occur in the domestic market as a result of this consumption activity (Brunn et al,2020).

The high level of consumption in Indonesia creates a high demand for goods and services. Investors respond to the demand for these goods and services in the form of investment in the business sector to meet the demand created from consumption. To increase production requires technology investment. Technological investment has an impact on increasing production pursuing an increase in existing demand. To support all these business activities, infrastructure is required which is invested by the government. High business activities have an impact on increasing gross domestic product, which is an indicator of increasing population income or population welfare (Mouraviev & Avramenko,2020).

This research examines the role of technology investment, business sector investment, government investment in public goods and consumption in an effort to improve the welfare of Indonesians. With the initial hypothesis that investment and consumption are causal relationships arising from investor expectations, because the function of investment in the theory of keyness is a function of investor expectations and interest rates. Investment arises from the expectation of a potential return on a demand and investment is an effort to increase production to meet that demand. Where demand arises due to increased consumption (Tekerek,2020).

Literature review

Today's technology has entered almost all sectors including the business and financial sectors. Technology is developing rapidly. Technological investment is an effort to improve technology owned, both in the form of independent development and imports of existing and more advanced technology from abroad (Naifar,2019).

Investment in the business sector is direct investment in the form of adding new businesses or new business units or developing existing businesses. Investment in the business sector has an impact on increasing domestic production which means absorbing new workers, increasing consumption and increasing the economy. The term consumption is the absorption of production from the domestic market which is an indicator of the level of population consumption (Chow & Schoenbaum,2020).

To support business sector investment and technology investment, infrastructure, which is generally public goods, is needed so that it is generally held by the government which is called infrastructure investment. The existence of infrastructure investment encourages economic activity which has an impact on increasing gross domestic product which is an indicator of the welfare of the population (Nanopoulos,2020).

Research methods

This research is about technology investment, business sector investment, government investment in public goods and consumption in an effort to improve the welfare of the population in Indonesia, which is reflected in the Gross Domestic Product. This study uses secondary data from world banks and processed regression using the moving average autoregression method with the following equation:

$$GDP_t = C_t + \beta_1 TI_{t1} + \beta_2 I_{t2} + \beta_3 G_{t3} + \beta_4 Co_{t4} + e_t$$

Where,
GDP = Gross Domestic Product
C = Constant
IT = Technology Investment
I = Business Sector Investment
G = Government Investment in Public Goods
Co = Consumption
e = Error Term

All financial data is calculated in USD.

Results and Discussion

The estimation results are as follows:

GDP = -20806975320.6 + 1.4842731573*CO + 1.04304864071*G - 2.9715448952*I - 8.76055809027*TI

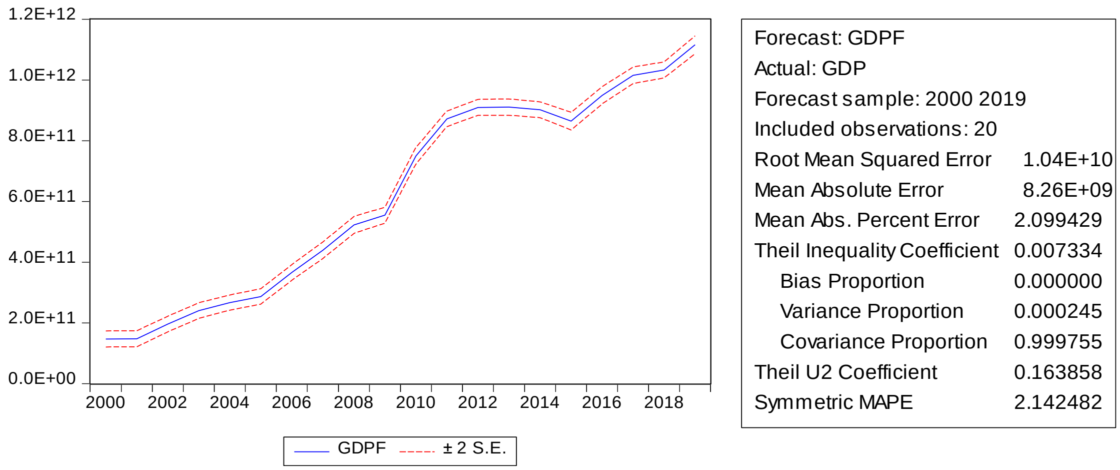
From the estimation results, government consumption and investment are positively related to gross domestic product, so it can be concluded that government investment in public goods and public consumption is a driving factor for the welfare of the Indonesian people. Where investment in the business sector, which is generally in the form of conglomeration and technology investment, is negatively related. This shows that Indonesia's economic system is supported by micro, small and medium enterprises and is agrarian in nature. Table 1 illustrates the estimation results as follows:

Table 1. Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.08E+10	1.23E+10	-1.695456	0.1106
CO	1.484273	0.209606	7.081247	0
G	1.043049	1.242836	0.839249	0.4145
I	-2.971545	1.357789	-2.188517	0.0449
TI	-8.760558	7.275735	-1.204079	0.2472
R-squared	0.999019	Mean dependent var		6.24E+11
Adjusted R-squared	0.998757	S.D. dependent var		3.39E+11
S.E. of regression	1.20E+10	Akaike info criterion		49.46055
Sum squared resid	2.15E+21	Schwarz criterion		49.70948
Log likelihood	-489.6055	Hannan-Quinn criter.		49.50914
F-statistic	3818.623	Durbin-Watson stat		0.987924
Prob(F-statistic)	0			

Based on the estimation results described in Table 1., it can be seen that the R-square is quite high, namely 0.999019, so the quantitative calculation results show a 99% level of truth. Figure 1. Shows the forecasting of economic growth in Indonesia.

Figure 1. Forecasting Economic Growth in Indonesia



Source: Author Computing

From the forecasting results, it can be seen that economic growth in Indonesia is experiencing very rapid growth by taking into account technology investment, business sector investment, government investment in public goods and consumption in an effort to improve the welfare of the population in Indonesia, which is reflected in the Gross Domestic Product. This shows that the informal business sector that is not touched by business sector investment, either FDI or direct investment or paper asset investment, needs to be strengthened by buying umkm products and informal sector products because the Indonesian economy relies on the informal sector.

Conclusion

Government consumption and investment are positively related to gross domestic product, so it can be concluded that government investment in public goods and public consumption is a driving factor for the welfare of Indonesians. This shows that the informal business sector is untouched by business sector investment, either FDI or direct investment or paper investment. assets need to be strengthened by buying umkm products and informal sector products because the Indonesian economy relies on this informal sector.

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