

The Role of Technology and Investment in the Business Sector in Driving Net Exports and Economic Growth

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Abstract

This study examines the role of technology and investment in the business sector in driving net exports and economic growth. This study uses secondary data from world banks to process regression using the moving average autoregression method. When the government focuses on directing the export-oriented Indonesian economy by increasing investment in the business sector and investment in the development of supporting technology for an export-oriented economy will result in integration between the business, technology and international trade sectors that will encourage net exports and export-based economic growth with a fluctuating economic growth trend following global economic conditions. However, despite this economic growth is positive.

Keywords: Technology Inclusion, Indonesia, Health Services

JEL Classification: C0, J24, J64

Background

Indonesia is an archipelago and maritime country. The long coastline and vast oceans hold potential in the international trade sector. Improvements in marine infrastructure can help improve the distribution of trade in international markets (Hiebert,2020).

International trade is dominated by international markets where every country can be involved in international trade. Investment in the business and technology sector plays a role in increasing production and increasing economies of scale so that it can reduce production costs and increase competitiveness in the international market (Hage,2020).

Increased competitiveness has an impact on increasing sales. When sales increase, a demand signal occurs which is responded to by increased production. This increase in production has an impact on an increase in gross domestic product, which signals economic growth (Kare-Silver,2011).

This study examines the Role of Technology and Investment in the Business Sector in Driving Net Exports and Economic Growth. We use the solow hypothesis where technology and investment play a role in increasing production which has an impact on increasing supply in the market. The market in this study focuses on the international market so that there is a boost in net exports and economic growth.

Literature review

Production consists of two factors, namely capital and labor. To increase production, it can be increased in terms of capital through investment in the business sector. And the addition of manpower or the addition of technological factors to improve the performance of human resources. Technology and investment in the business sector play a role in increasing production (Camic,2020).

Production produces products. When production is increased, more products are produced. Products are sold in the domestic market and also in the export market. When products are produced for sale in export or international markets, technological improvements and investment in the business sector can increase the supply side in the international market (Krar & Gill,2003).

An increase in exports can boost net exports. With the encouragement of net exports, cash inflow will increase and can increase domestic production. When domestic production increases, gross domestic product increases. Where gross domestic product is an indicator of economic growth (World Bank,2019).

Research methods

This research studies the role of technology and investment in the business sector in driving net exports and economic growth. This study uses secondary data from world banks and processed regression using the moving average autoregression method with the following equation:

$$GDP_t = C_t + \beta_1 TI_{t1} + \beta_2 I_{t2} + \beta_3 NX_{t3} + e_t$$

Where,

GDP = Gross Domestic Product

C = Constant

IT = Technology

I = Investment in the Business Sector

Nx = Net Exports

e = Error Term

All financial data is calculated in USD.

Results and Discussion

The estimation results are as follows:

$$GDP = -3746281939.9 + 43.531962113*I + 1.35654085839*NX + 186.102739839*TI$$

From the estimation results, the Role of Technology and Investment in the Business Sector can Drive Net Exports and Economic Growth as indicated by the positive relationship of technology (IT), Business Sector Investment (I) and Net Exports (Nx). Based on the estimation results, when the government focuses on directing Indonesia's export-oriented economy by increasing investment in the

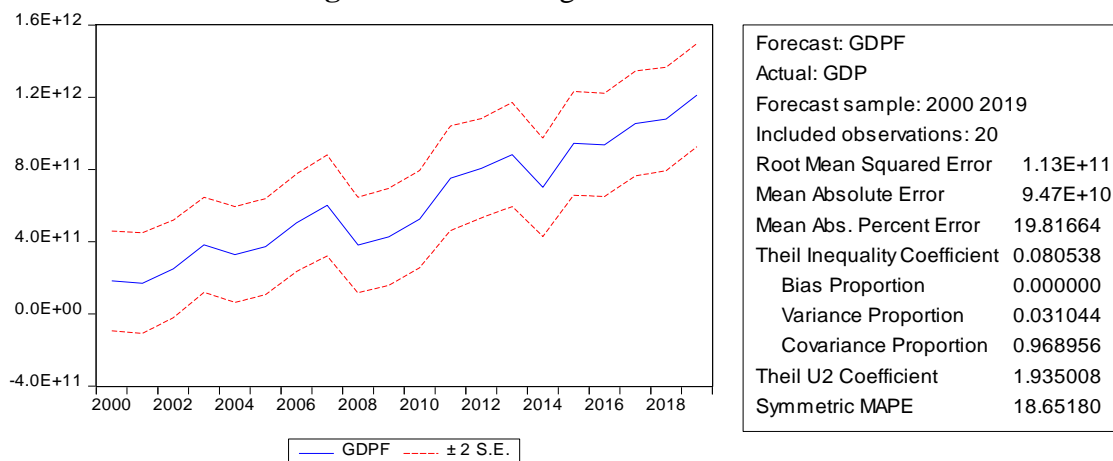
business sector and investment in developing supporting technology for an export-oriented economy, there will be an integration between the business, technology and international trade sectors that encourage net exports and export-based economic growth. Table 1 illustrates the estimation results as follows:

Table 1. Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.75E+09	1.08E+11	-0.034837	0.9726
I	43.53196	8.447675	5.15313	0.0001
NX	1.356541	3.677728	0.368853	0.7171
TI	186.1027	42.93597	4.334425	0.0005
R-squared	0.883189	Mean dependent var		6.24E+11
Adjusted R-squared	0.861287	S.D. dependent var		3.39E+11
S.E. of regression	1.26E+11	Akaike info criterion		54.14022
Sum squared resid	2.56E+23	Schwarz criterion		54.33936
Log likelihood	-537.4022	Hannan-Quinn criter.		54.17909
F-statistic	40.32463	Durbin-Watson stat		0.973479
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 0.883189 so that the quantitative calculation results show the truth level of 88%. Figure 1. Shows the forecasting of economic growth in Indonesia.

Figure 1. Forecasting Economic Growth in Indonesia



Source: Author Computing

From the results of forecasting, it can be seen that economic growth in Indonesia is experiencing very rapid growth by taking into account the Role of Technology and Investment in the Business Sector to Encourage Net Exports and Economic Growth in the process of building forecasting economic growth in Figure 1. Based on the results of estimates and forecasting there is an economic growth trend even though the economy volatile following global economic conditions. However, economic growth is towards a positive direction. When the government focuses on directing Indonesia's export-oriented economy by increasing investment in the business sector and investment in developing supporting technology for an export-oriented economy, there will be integration between the business, technology and international trade sectors that encourage net exports and export-based economic growth.

Conclusion

When the government focuses on directing Indonesia's export-oriented economy by increasing investment in the business sector and investment in the development of supporting technology for an export-oriented economy, there will be integration between the business, technology and international trade sectors that encourage net exports and export-based economic growth with volatile economic growth trends following global economic conditions. However, even so, economic growth is towards a positive direction.

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