

Inclusion of Technology, Human Capital and Foreign Direct Investment in Indonesia

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Abstract

This research studies the relationship between technology, human capital and financial capital in the manufacturing sector through human capital investment mechanisms and technology using secondary data from publicly traded companies in the manufacturing sector listed on the Indonesia Stock Exchange in the form of annual reports on related companies every year processed by regression using the average autoregression method. moving average. We find that investment in human capital and technology in the manufacturing sector in Indonesia is positively related to corporate earnings in the manufacturing sector.

Keywords : Technology, Indonesia, Human Capital

JEL Classification : C0, J24,J64

Background

Information and communication technology originated from the invention of the internet in the 1990s. Information and communication technology enters various business sectors from commerce to manufacturing. Information and communication technology known as the internet is a new and growing economic force. Information and communication technology is also capable of driving economic growth (Kettemann,2020).

Information and communication technology is developing massively and continues to evolve according to the needs of modern humans today. The strength of information and communication technology is a computer technology that has been incarnated and developed into various gadgets ranging from cellphones, tablets to laptops (Latchem,2017).

The Internet changes people's lives and the media. The internet is replacing books, newspapers, letters, reports which all lead to digital and are getting more massive so they can reduce paper usage. Information and communication technology is also very helpful in logistics with GPS technology. Information and communication technology can save production and increase sales and public consumption so that economic growth can be well boosted (Seaward,2020).

Information technology also encourages foreign investment in line with the increasingly massive globalization. then the connections between countries and across continents make the business increasingly thriving. Information and communication technology has also entered the human resource management space. Modern humans are required to master technology and continue to develop themselves. So that interaction is formed between human capital, technology and the opportunities for incoming direct investment which can open up new jobs (Stanzel,2019).

The more ready the population is to adapt to globalization as a result of the development of information technology with sufficient human capital and high technological inclusion, it will drive

economic growth and increase investor interest so as to attract foreign direct investment known as FDI (Cheng,2020).

Literature Review

The foreign direct investment provides new opportunities for job seekers who have sufficient qualifications to work professionally. The readiness of job seekers is determined by how much they develop themselves so that they are worthy enough to be recruited as part of the company (Schwab,2017).

Human capital can be increased through education and training mechanisms. Human capital is a very valuable capital for everyone. Because human capital is attached to humans themselves (Burton-Jones & Spender,2012).

Technology plays a role to facilitate human work. Including information and communication technology known as digital technology. Digitalization encourages globalization and international economic cooperation (Potenza et al,2020).

The role of technology is the efficiency of communication and coordination to form new economies such as shared driving, e-commerce, application-based food ordering and so on. Digitalization encourages innovation and to develop innovation adequate human capital is required (Popkova et al,2018).

The role of technology and human capital accumulates into very high economic performance and high productivity. This increases investors' interest in investing based on the information they get which generates expectations in the minds of investors. The relationship between technology, human capital, economic growth and the attractiveness of investment makes for a very high productivity boost (Becchetti,2019).

Research Method

This research studies the relationship between technology, human capital and economic growth on the attractiveness of foreign direct investment in Indonesia. This study uses secondary data from world banks and processed regression using the moving average autoregression method with the following equation:

$$FDI_t = C_t + \beta_1 HCI_{t1} + \beta_2 TI_{t2} + \beta_3 GDP_{t3} + e_t$$

Where,

FDI = Foreign Direct Investment

C = Constant

HCI = Human Capital Investment

IT = Technology Inclusion

GDP = Gross Domestic Product

e = Error Term

All financial data is calculated in USD, technology inclusion data is calculated on the number of gadgets in Indonesia that access the internet.

Result and Discussion

The estimation results are as follows:

$$FDI = -23848168441 + 0.0390762296128 * GDP - 0.234157988208 * HCI + 0.0191487202727 * TI$$

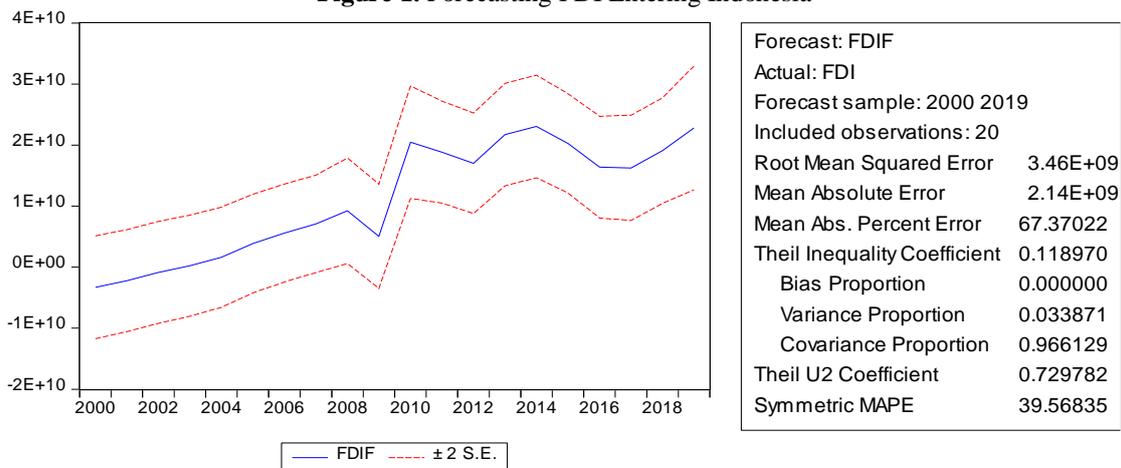
From the estimation results, economic growth (GDP) and technology inclusion (IT) are positively related to FDI. However, human capital investment (HCI) has a negative relationship. Table 1 illustrates the estimation results as follows:

Table 1. Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.38E+10	5.37E+09	-4.437153	0.0004
GDP	0.039076	6.90E-03	5.665757	0
HCI	-0.234158	6.56E-02	-3.570805	0.0026
TI	0.019149	0.03719	0.514886	0.6137
R-squared	0.87325	Mean dependent var		1.11E+10
Adjusted R-squared	0.85	S.D. dependent var		9.98E+09
S.E. of regression	3.87E+09	Akaike info criterion		47.16846
Sum squared resid	2.40E+20	Schwarz criterion		47.36761
Log likelihood	-467.6846	Hannan-Quinn criter.		47.20734
F-statistic	36.7441	Durbin-Watson stat		2.32021

Based on the estimation results described in Table 1., it can be seen that the R-square is quite high, namely 0.8732 so that the quantitative calculation results show the level of truth of 87%. Figure 1. Shows the forecasting of FDI entering Indonesia.

Figure 1. Forecasting FDI Entering Indonesia



Source: Author Computing

From the forecasting results, it can be seen that the incoming FDI tends to increase in line with economic growth in Indonesia. Human capital investment tends to be in the form of skilled human resources preparation to encourage economic growth that attracts investors so that it can attract foreign direct investment to Indonesia which is strengthened by increasing technological inclusion in Indonesia which is increasingly massive.

Conclusion

Human capital investment does not indicate a pull in FDI. However, it is important to prepare human capital to welcome FDI that enters Indonesia and promote economic growth. The impetus for economic growth and technological inclusion indicate the strong pull of FDI into Indonesia.

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