

The Effect of Foreign Direct Investment Human Capital and Community Welfare

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ABSTRACT

National development goals are not merely to create growth in Gross Domestic Product (GDP) and high per capita income. But more than that, it expected to alleviate poverty levels and income inequality in every class of society. Foreign Direct Investment (FDI) one of the most important investment to accelerate economic growth. The advantages of FDI inflow for host country are: capital accumulation; job creation; transfer of technology and management; and access to international market networks. This study aims to determine the relationship between FDI, economic growth, human capital, and community welfare. The quantitative analysis method in this study uses a simultaneous equation system model with six structural equations: domestic investment, economic growth, public consumption, education, health, unemployment and poverty. In addition, there are 3 identity equations: investment equation, the labour force, and economic growth. All data is a combination of cross-sectional and time-series data. The cross-section data used are 33 provinces in Indonesia and the time series data for the period 2010 to 2019.

Keywords : Foreign Direct Investment, Economic Growth, Human Capital, Community Welfare, 2SLS

Article Info

Volume 8, Issue 5
Page Number : 244-251

Publication Issue :

September-October-2021

Article History

Accepted : 01 Oct 2021
Published: 10 Oct 2021

I. INTRODUCTION

National development is a comprehensive human development that is carried out in a planned, integrated, directed, and sustainable manner to spur the improvement of national capabilities in the context of realizing an equal and equal life, not only for one group or part of the community, but for the whole community. National development must be truly felt by all the people as an improvement in the level of life with social justice, which is the goal and

aspiration of the independence of the Indonesian nation.

One of the goals of national development is economic growth followed by equitable distribution of development results and creating prosperity for all levels of society. National development is not merely to create growth in Gross Domestic Product (GDP) and high per capita income. But more than that, national development is expected to eliminate poverty levels and income inequality in every class of society. National development is not merely to create

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Goal 1 for Sustainable Development Goals (SDGs) is to “end poverty everywhere and in all its forms” with a target to eradicate extreme poverty below the poverty line; deduct at least half of the number of poor people; implement social protection systems and measures for all residents; and ensuring that the poor and vulnerable have equal rights to access economic resources. Meanwhile, in Indonesia's National Medium-Term Development Plan 2019-2024 poverty alleviation strategies are divided into two micro strategies, reducing the burden of expenditure through the provision of social assistance and increasing the income of the vulnerable poor through productive economic activities so that they can be independent and more competitive.

To implement programs and activities for poverty reduction and improving people's welfare, Indonesia requires a large budget allocation. Indonesia needs other funding sources to support the programs. The funds needed can be met through various sources, one of which is through investment (Cahyono 2013). According to research conducted by Panayotou (1998), Foreign Direct Investment (FDI) is more important and ensures the continuity of the country's development. It's because the flow of FDI into the host country is followed by the transfer of technology, know-how, management skills, and relatively small business risks (Yildirim and Tosuner 2014).

Some of the advantages of FDI as an engine of economic growth in destination countries, namely: (a) increasing capital formation and labour augmentation; (b) increase manufacturing exports; (c) providing access to specialized resources such as management knowledge, access of skilled labour to international production networks (Gittens Dexter 2013); and (d)

FDI can result in technology transfer and spillover effects for recipient countries (Florence et al. 2016, Zhang 2006).

FDI inflow will create jobs and can absorb the existing workforce in the host country. Thus, an increase in FDI inflows into investment recipient countries will increase the demand for labour. FDI that enters the host country immediately transmits new technology, managerial and technical skills that are more advanced than local companies (Kheng V et al 2016). Thus, an increase in FDI inflows into investment recipient countries will increase the demand for labour.

FDI inflows will improve education and the welfare of the Indonesian people through increasing employment, income and knowledge transfer. If it is linked again with the Solow Growth Model, economic growth is assumed to be influenced by the growth of physical production factors and labour, both population growth and the quality of the workforce. By improving the quality and competence of the workforce, productivity will increase so that it will have a positive impact on economic growth.

Increasing economic growth, will be affected on increase in employment and a decrease in unemployment. This will increase the per capita income of the people. The ability of the community to meet their basic needs will also increase, so that the poverty level will decrease and the welfare of the community will increase.

II. METHODS AND MATERIAL

The type of data used in this research is secondary data. All data are a combination of cross-sectional and time-series data. The cross-section data used are 33 provinces in Indonesia with time series data for the period 2010 to 2019. This approach does not pay attention to individual dimensions and time. It is

assumed that the behavior of the data between individuals is the same in various time periods. The combination of 33 provinces for 8 years resulted in 330 data records. The data is sourced from various related institutions: Statistic Indonesia (Badan Pusat Statistik/BPS); Bank of Indonesia, the Investment Coordinating Board (Badan Koordinasi Penanaman Modal/BKPM); the Ministry of Social Arrairs; Ministry of Health; and various kinds of literature or publications related to the study this.

The quantitative analysis method uses a simultaneous equation system model. Simultaneous equation system model provides complete information about the relationship between one economic variable and another. The model estimation method used is Two Stage Least Square (2SLS) because every structural equation in the model is over identified. The 2SLS method is carried out in two stages. First, predict each equation with all exogenous variables in the model, so that the estimated value of each endogenous variable can be obtained. Second, the estimated value of the endogenous variable is then entered as an explanatory variable (replacing the actual value of the variable) in the relevant equations.

The structure of the model of the impact of Foreign Direct Investment (FDI) on human capital and the welfare of the Indonesian people is divided into seven structural equations and two identity equations. More details regarding the specifications of the human capital investment model for the welfare of the community are as follows:

Investment Block

Investment

$$I_{it} = a_0 + a_1IR_{it} + a_2INFLAS_{it} + a_3Y_{it} + e_{1it}$$

Total Investment

$$I = FDI + DDI \text{ (identity equation)}$$

Economic Growth Block

PDRB

$$Y_{it} = b_0 + b_1LFDI_{it} + b_2LDDI_{it} + b_3L_{it} + b_4G_{it} + e_{2it}$$

Consumption

$$C_{it} = c_0 + c_1Y_{it} + e_{3it}$$

Export

$$X_{it} = d_0 + d_1EXRATE_{it} + d_2LY_{it} + e_{4it}$$

Economic Growth

$$Y = C + I + G + X \text{ (identity equation)}$$

Human Capital Block

Education

$$RRLS_{it} = e_0 + e_1EXEDU_{it} + e_2LY_{it} + e_3T_{it} + e_4LRRLS_{it} + e_{5it}$$

Health

$$AHH_{it} = f_0 + f_1YCAP_{it} + f_2EXHEALTH_{it} + e_{6it}$$

Community Welfare Block

Employment Opportunity

$$L_{it} = g_0 + g_1AHH_{it} + g_2UMR_{it} + g_3Y_{it} + e_{7it}$$

Workforce

$$AK = L + UNEMP$$

Poverty

$$POV_{it} = h_0 + h_1L_{it} + h_2PKH_{it} + h_3LPOV_{it} + e_{7it}$$

Description:

- I = Total Investment (million rupiah)
- FDI = Foreign Direct Investment (million rupiah)
- LFDI = Lag FDI (million rupiah)
- DDI = Domestic Direct Investment (million rupiah)
- LDDI = Lag DDI (million rupiah)
- Inflasi = Average interest rate inflation (%)
- YCAP = GDP per capita (million rupiah)
- IR = Interest rate (%)
- X = Export (million rupiah)
- C = Consumption (million rupiah)
- RRLS = Average Length of School (years)
- LRRLS = Lag RRLS (years)
- AHH = Life expectancy (years)
- EXEDU= Local government spending on education (million rupiah)
- EXHEALTH= Local government spending on helath (million)

- rupiah)
- PKH = Family Hope Program (beneficiary family)
- Y = Gross Regional Domestic Product (million rupiah)
- LY = Lag Y (million rupiah)
- L = Numbers of workers (000 people)
- G = Local government spending (million rupiah)
- UMR = Provincial minimum wage (rupiah)
- UNEMP = Number of unemployed workers (000 people)
- POV = Number of poor people (000 people)
- LPOV = Lag POV (000 people)
- AK = Workforce (000 people)

III.RESULTS AND DISCUSSION

A. Poverty in Indonesia

Poverty in Indonesia is a complex and multidimensional problem. To overcome this, it is necessary to have programs targeting groups with socioeconomic conditions in the lowest decile. The poverty rate in Indonesia tends to decrease in the last 21 years. In 1998 the poverty rate reached 24.2 percent and continued to decline to single digits in 2019.

The average number of poor people in all provinces has a downward trend, but the decline is slowing down. In 2010 the national poverty rate reached 13.33 percent. The largest percentage of poor people are in the provinces of Papua and West Papua, at 26.80 percent and 21.70 percent, respectively. Meanwhile, the lowest percentage of poor people is in Bali Province, which is 4.45 percent.

The poverty rate first broke below the single digits in 2018, namely 9.82 percent in March and continued to fall to 9.66 percent in September 2018. The decline in poverty rates occurred in all provinces of Indonesia. On the other hand, in several provinces, the poverty rate has increased compared to the previous year, namely in the provinces of Riau Islands, Bangka Belitung Islands, NTT, North Maluku, and Papua. In

fact, in several provinces such as NTT and Papua, poverty has not decreased from the previous few years. Extraordinary events such as famine in the Asmat Regency of Papua and natural disasters in NTT exacerbated poverty conditions in this region.

The BPS (2019) publication states that the percentage of poor people in September 2019 was 9.22 percent, a decrease of 0.19 percentage points against March 2019 and a decrease of 0.44 percentage points against September 2018. In September 2019 the number of poor people in Indonesia reached 24.79 million people.

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B. FDI and Other Factors Affecting Human Capital and Poverty Rates in Indonesia

Determinants of Investment (I)

TABLE 1
PARAMETER ESTIMATION RESULTS OF THE DDI EQUATION

Variabel	Koefisien	Probabilitas
Intersep	4850103	0.3664
IR	-222930	0.8188
Inflasi	-105781	0.8964
Y	0.063386	0.0001

Based on the estimation results, the GRDP variable has a positive and significant relationship to the total investment value in Indonesia. An increase in GRDP of one million rupiah will increase the total investment value by Rp. 63,386.

Determinants of GDRP/PDRB

All variables in the GRDP equation have a positive and significant effect on GRDP. In accordance with the research of Nistor (2014) that the entry of LFDI into the host country will increase economic growth through the accumulation of physical capital. Mencinger (2003) states that LFDI is one of the driving factors for the economy through capital formation and technological improvement that increases the economic growth of the investment destination country, as well as a solution to the problems of developing countries' economies. Similar to LFDI, LDDI has a positive and significant impact on PRDB as a factor of capital formation. Working manpower and local government spending have a positive and significant effect on GRDP.

TABLE 2
PARAMETER ESTIMATION RESULTS OF THE PDRB EQUATION

Variabel	Koefisien	Probabilitas
Intercept	-3.113E7	0.0001
LFDI	1.072255	0.0015
LDDI	8.760742	0.0001
L	25.47778	0.0001
G	6.119164	0.0001

Determinants of Consumption

AN INCREASE IN GRDP OF ONE MILLION RUPIAH WILL INCREASE CONSUMPTION BY RP. 595,230. INCREASED ECONOMIC GROWTH WILL HAVE A POSITIVE IMPACT ON A COUNTRY'S CONSUMPTION.

TABLE 3
PARAMETER ESTIMATION RESULTS OF THE CONSUMPTION EQUATION

Variabel	Koefisien	Probabilitas
Intercept	-1.484E7	0.0001
Y	0.595230	0.0001

Determinants of Export

The GRDP Lag variable has a positive and significant effect on exports. An increase in GRDP Lag by one million rupiah will increase exports by Rp. 276.392.

TABLE 4
PARAMETER ESTIMATION RESULTS OF THE EXPORT EQUATION

Variabel	Koefisien	Probabilitas
Intercept	68396012	0.1500
EXRATE	-5049.73	0.1845
LY	0.276392	0.0001

Determinants of Education

The average length of schooling (RRLS) is a proxy for education. Variables that have a significant effect on the average length of schooling are the trend and lag of the average length of schooling. An increase over the previous year's average length of schooling by one year will increase the current year's average length of schooling by 0.992 years.

TABLE 5
PARAMETER ESTIMATION RESULTS OF THE EDUCATION EQUATION

Variabel	Koefisien	Probabilitas
Intersep	0.122936	0.0002
EXEDU	3.47E-10	0.7794
LY	-162E-13	0.4310
Trend	0.011368	0.0001
LRRLS	0.992231	0.0001

Determinants of Health

Life expectancy (AHH) is a proxy for the quality of public health. In this equation the variables that affect AHH are GRDP per capita and local government spending on health. An increase in GRDP per capita of one million rupiah will increase the AHH. GRDP per capita is an indicator to determine the real economic growth per capita of a country's population. If the per capita economic growth of the population improves, it is hoped that the quality of life of the

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community will also increase, especially in the health sector.

An increase in local government spending on health by one million rupiah will increase the AHH by 3.96 years. It states that local government expenditures used for health can have a positive influence on improving the quality of public health.

TABLE 6
PARAMETER ESTIMATION RESULTS OF THE HEALTH EQUATION

Variabel	Koefisien	Probabilitas
Intersep	67.98708	0.0001
YCAP	0.000021	0.0009
EXHEALTH	3.964E-6	0.0005

Determinants of Employment Opportunity

In this equation, the UMR variable has a negative effect on increasing community employment opportunities. An increase in the UMR by one thousand rupiah will reduce job opportunities by 279.930 people. The increasing UMR indicates that the wages to be paid by the company will increase, so the costs incurred by the company will be even greater if the UMR is higher. Therefore, by increasing the minimum wage, the competition for job opportunities will be tighter because the company will reduce the number of workers to minimize costs. On the other hand, an increase in GRDP of one million rupiah will increase employment opportunities by 10 people.

TABLE 7
PARAMETER ESTIMATION RESULTS OF THE EMPLOYMENT OPPORTUNITY EQUATION

Variabel	Koefisien	Probabilitas
Intercept	-420426	0.9384
AHH	25517.32	0.7489
UMR	-0.27993	0.0018
Y	0.010384	0.0001

Determinants of Poverty

In this equation, the variables that affect the number of poor people are PKH and the number of poor people in the previous year (LPOV). Improvements to the PKH social assistance program provided by the government in the form of money transfers can reduce the number of poor people in Indonesia. PKH social assistance funds can be used to meet the basic needs of the poor, such as the need for education, health and nutritious food. It is hoped that by fulfilling the basic needs of the poor, their level of welfare will increase. On the other hand, the number of poor people in the previous year will overshadow the number of poor people in the current year. This is because the socio-economic conditions of the poor in the previous year will affect the socio-economic conditions of the current year.

TABLE 8
PARAMETER ESTIMATION RESULTS OF THE POVERTY EQUATION

Variabel	Koefisien	Probabilitas
Intercept	10.68601	0.0844
L	-4.91E-7	0.8961
PKH	-0.00003	0.1462
LPOV	0.967476	0.0001

IV.CONCLUSION

The estimation results show that Lag FDI and Lag DDI have a direct effect on economic growth in Indonesia. However, economic growth has a negative effect on health. The quality of education is influenced by the quality of education in the previous year, while the quality of health is influenced by GRDP per capita and local government spending on health

Economic growth and the regional minimum wage (UMR) have a significant impact on employment opportunities. In addition, PKH government assistance can reduce the number of poor people

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through the provision of cash transfers to meet the basic needs of the poor.

V. REFERENCES

- [1]. Agbola F, "Does human capital constrain the impact of Foreign Direct Investment and remittances on economic growth in Ghana?" *Applied Economics*, 2013.
- [2]. Ahmad F, "Impact of FDI Inflows on Poverty Reduction in the ASEAN and SAARC Economies" *Sustainability*, 2019.
- [3]. Anetor FO, "The impact of Foreign Direct Investment, foreign aid and trade on poverty reduction: Evidence from Sub-Saharan African countries" *Cogent Economics & Finance*, 2020.
- [4]. Bhaumaik, Dimova, "Does Human capital Endowment of Foreign Direct Investment Recipient Countries Really Matter? Evidence from Cross-Country Firm Level Data" *Review of Development Economics*, 2013.
- [5]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2010.
- [6]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2011.
- [7]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2012.
- [8]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2013.
- [9]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2014.
- [10]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2015.
- [11]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2016.
- [12]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2017.
- [13]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2018.
- [14]. Badan Pusat Statistik, "Statistik Indonesia", Jakarta: BPS pusat, 2019.
- [15]. Cahyono KD, "Determinan Foreign Direct Investment (FDI) dan Pengaruhnya terhadap Produk Domestik Bruto (PDB) di Indonesia", Bogor: Institut Pertanian Bogor, 2013.
- [16]. Demissie M, "FDI, Human capital, and Economic Growth", Huddinge (SWE): Södertörn University, 2015.
- [17]. Do QA, "Spatial Impact of Foreign Direct Investment on Poverty Reduction in Vietnam" *Risk and Financial Management*, 2021.
- [18]. Florence OO, David KK, Daniel OI, "Determinants of Foreign Direct Investment and Its Causal Effect on Economic Growth in Nigeria" *KJBM*, 2016.
- [19]. Koutsoyiannis A, "Theory of Econometrics: An Introductory Exposition of Econometrics Methods Second Edition", London (GB): The Macmillan Press Ltd, 1977.
- [20]. Mankiw NG, "Teori Makroekonomi Edisi Keenam", Jakarta: Erlangga, 2007.
- [21]. OECD, "Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs", OECD, 2002.
- [22]. Nurmilah R, "Pengaruh Penanaman Modal Asing dan Human Capital terhadap Pertumbuhan Ekonomi Studi Kasus 33 Provinsi di Indonesia" *Jurnal Ilmiah Ilmu Ekonomi*, 2016.
- [23]. Ruxanda G, Muraru A, "FDI And Economic Growth. Evidence From Simultaneous Equation Models" *Journal for Economic Forecasting*, 2010.
- [24]. Sari GAARM, Baskara IGK, "Pengaruh Pertumbuhan Ekonomi, Suku Bunga, dan Nilai Tukar terhadap Investasi Asing Langsung di Indonesia" *E-Jurnal Manajemen Unud*, 2018.
- [25]. Sharma B, Gani A, "The Effects of Foreign Direct Investment on Human Development" *Global Economy Journal*, 2007.
- [26]. Todaro MP, Smith SC, "Pembangunan Ekonomi Edisi Kesembilan", Jakarta: Erlangga, 2006.
- [27]. Zhuang Hong, "The effect of Foreign Direct Investment on human capital development in

East Asia” Journal of the Asia Pacific Economy, 2016.

- [28]. Zhang KH, “Foreign Direct Investment and Economic Growth in China: A Panel Data Study for 1992 – 2004” WTO, China and Asian Economies Conference, 2006.

Cite this article as :

Ifqi Khairunnisa, Sri Hartojo, Yeti Lis Purnamadewi, "The Effect of Foreign Direct Investment Human Capital and Community Welfare", International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET), Online ISSN : 2394-4099, Print ISSN : 2395-1990, Volume 8 Issue 5, pp. 244-251, September-October 2021. Available at doi : <https://doi.org/10.32628/IJSRSET218523>
Journal URL : <https://ijsrset.com/IJSRSET218523>