http://ejournal.seaninstitute.or.id/index.php/Ekonomi
Jurnal Ekonomi, Volume 12, No 02, 2023
ISSN: 2301-6280 (print) ISSN: 2721-9879 (online)

HUMAN CAPITAL AS MODERATING THE EFFECT OF FOREIGN INVESTMENT AND FOREIGN DEBT ON ECONOMIC GROWTH

[1]Azam Asykarulloh, [2]Joko Setyono, [3]Mayogi Araffi, [4]Rosihaturrosyidah, [5]Ahmad Ulil Albab Al Umar
[1,2,3,4,5] Fakultas Ekonomi dan Bisnis Islam, Universitas Islam Negeri Sunan Kaljaga Yogyakarta

ARTICLE INFO

Keywords:
Foreign Investment
Foreign Debt
Human Development Index
Economic Growth.

E-mail:
Azam.asykarulloh@gmail.com

ABSTRACT

For developing countries, development requires capital including foreign investment and foreign debt. The capital that has been collected will then be optimally managed by good human resources so that it can produce economic growth. This study attempts to examine the effect of foreign investment and foreign debt on economic growth with the Human Development Index as a moderating variable. The findings of this study indicate that foreign investment has a direct positive effect on economic growth. Foreign debt has a negative effect on economic growth. Meanwhile, the Human Development Index can only moderate foreign debt variables and provide a positive influence.

1. INTRODUCTION

Economic growth is not only related to a fertile business climate, but also related to investment. In the midst of the Covid-19 pandemic storm, Investment is the root of efforts to recover and grow the Indonesian economy. (BKPM, 2022) Indonesia is one of the investment destination countries for foreign investors. This is due to the very good condition of Indonesia's economic fundamentals (DPMPTSP, 2022). This is supported by the enactment of Law no. 11 of 2020 concerning Job Creation and operational instructions. This regulation has a positive sentiment impact on investors to realize their investments, both in preparation, construction and production (BKPM, 2021). Infographically, the relationship between investment or foreign investment and economic growth can be seen as follows:

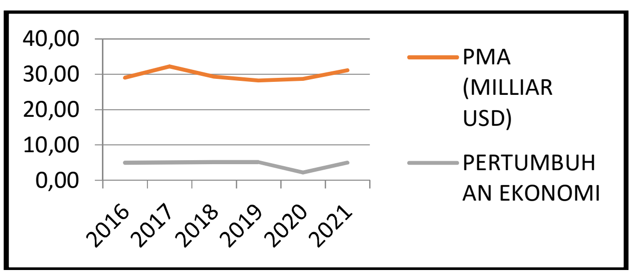

Figure 1. Foreign Investment and Economic Growth

According to Andreica & Maricescu (2002) Investment can influence growth by increasing productivity and efficiency in the use of natural resources. In Indonesia, this study has been conducted by Nuraini (2016) & Rizky, Agustin Grisvia (2022) which states that foreign investment has a significant influence on the level of economic growth.

In line with this, Arianti & Mauzi (2013) stated that foreign investment is positively related to economic growth in both the short and long term. Balasubramanyam et al (1996) conducted a study on developing countries and found similar results for countries with a trade strategy with export priority.

Atique & Ahmad (2005) found that foreign investment has a positive relationship with economic growth in Pakistan. Seyoum, Whu & Lin (2015) conducted a study of developing countries in Africa, and found that FDI is a component of gross capital and real GDP.

Many pro-investment studies have been carried out, but there are several philosophical arguments that view investment as not having an impact on economic growth. The impact of foreign investment accumulating in multinational companies is considered uneven, affecting a small part of society, and the output issued is not in accordance with the social needs of the community. (Todaro, 2002)

Apart from investment, the source of state funding to boost the economy is foreign debt. In the 2020-2024 RPJMN which discusses economic resilience, regional development, and infrastructure. The development agenda requires enormous funding support which cannot yet be financed by tax revenues or other revenues. Therefore, the government took steps, namely foreign debt (BAPPENAS, 2020).

However, Murniawati et al (2021) found negative results between foreign debt and economic growth in 7 developing countries. junaedi (2018) found contrasting results, although national foreign debt increases GDP and reduces poverty, foreign debt cannot increase people's welfare. Fabiana Meijon Fadul, (2019) found a negative relationship between foreign debt and economic growth in Oman.

Another variable for achieving fundamental economic growth is human capital. Human capital is the most important thing for creating a supportive environment for managed foreign investment (Andreica & Maricescu, 2002). Human capital is the main source for achieving economic productivity (Rasyidi et al., 2020). Makki & Somwaru (2004) found a strong relationship between FDI in advancing economic growth, and the contribution of FDI to economic growth can increase through its positive interaction with human capital.

Azam (2015) conducted a study on former Soviet countries and found that foreign investment has a role in facilitating economic growth, then increasing human capital must be a priority in managing state funding to encourage economic growth. Ramzan et al (2019) conducted research on FDI, human capital, and economic growth. Shows when human capital is at the upper limit, FDI has a positive effect on economic growth. However, when HC is at a low threshold, FDI has a negative impact.

Harrod-Domar's theory (1947) states that there is a relationship between a country's saving rate and its output growth rate (Todaro, 2002). Harrod-Domar's economic growth also explains the conditions for achieving growth, namely goods capital at full capacity, savings proportional to income, and the ratio of production capital. (Rizky, Agustin Grisvia, 2022). This theory provides an important role for investment in the process of economic growth as a stock of capital to meet production demands (Jhingan, 2003). The relationship between investment and economic growth has long been studied, including by Makki & Somwaru (2004); Zeshan Atique, Mohsin Hasnain Ahmad (2005); Hooshang Amirahmadi & Weiping Wu (1994), Balasubramanyam et al (1996); Nuraini, 2016; Rizky, Agustin Grisvia (2022).
H1: Foreign Investment has a positive effect on Economic Growth

In addition to export and investment proceeds, developing countries also receive other sources of funding, namely public development assistance (official) and private assistance (unofficial) by NGOs (Todaro, 2002). However, the concept of foreign aid that is now widely accepted and used is all soft loans and official grants aimed at transferring resources from developed countries to developing countries for development purposes. (Jhingan, 2003). The Keynesian view of debt as an increase in the spending budget will have a significant effect on economic growth as demand for available capital grows. (Rachmadi, 2013). Discussion of debt and economic growth has been carried out by various parties including Fabiana Meijon Fadul (2019); Lotto & Mari (2018) ; Aderu, Omolade (2019) ; Murniawati et al., (2021). With this hypothesis is taken is:
H2: Foreign Debt has a positive effect on economic growth.

Roamer (1999) views human capital through an economic orientation perspective, namely as a fundamental variable of economic productivity (Nurkholis, 2016). The level of development of human capital is an important conditioning variable for driving economic growth through FDI for developing countries. (Ramzan et al., 2019) Various studies using human capital as an intermediary for state capital with economic growth have been carried out by Amri (2020); Islahul amri & Misbahul Munir (2020) ; Plantins (2021) . With this hypothesis taken:
H3: Foreign Investment moderated by Human Capital has a positive effect on Economic Growth.
H4: External Debt moderated by Human Capital has a positive effect on Economic Growth.

2. METHOD

This research method uses a quantitative approach method. Namely by using data types in the form of numbers and tested with statistical models. From the existing variables, we look for how much influence the independent variables have on the dependent variable. (Sugiyono, 2013) Time series data were obtained from the official website of Bank Indonesia and BPS and processed with Moderate Regression Analysis using the Eviews Application. Foreign Investment, Foreign Debt, and economic growth variables are obtained through data from the Central Bureau of Statistics and are in the form of nominal ratios. Meanwhile, the Human Capital variable is proxied by the Human Development Index through ordinal data. The human development index is a quantitative measure of the quality of the

http://ejournal.seaninstitute.or.id/index.php/Ekonomi
Jurnal Ekonomi, Volume 12, No 02, 2023
ISSN: 2301-6280 (print) ISSN: 2721-9879 (online)

population and development which is formed through 3 dimensions, namely health, education and liveability (BPS, 2022).

3. RESULT AND DISCUSSION

Decriptive Statistic

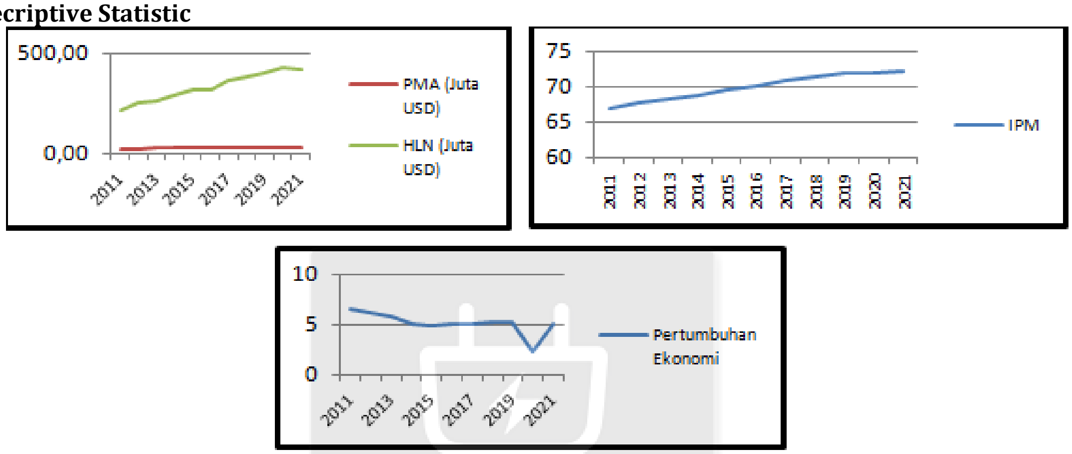

Figure 2. Statistic Descriptive

We can see that the foreign investment variable (X1) has a trend that tends to increase, foreign debt (X1) has a trend that tends to be flat. The HDI moderating variable (Z) has a trend that tends to increase from year to year, while economic growth (Y) has a fluctuating trend and has fallen sharply during the Covid-19 years, namely 2020-2021.

Table 1. Descriptive Statistics

VARIABLE	Mean	Median	Maximum	Minimum	Std. Dev.
PMA (juta USD)	28.08545	28.67	32.24	19.47	3.427452
HLN (juta USD)	332.7909	318.9	427.5	219.6	71.57161
IPM	70.00727	70.18	72.29	67.09	1.825947
PE	5.086364	5.07	6.5	2.19	1.10595

Through the table & graph above we can conclude as follows:

1. The variable foreign investment (X1) has an average value of 28.08 Million USD, with a minimum value of 19.47 Million USD and a maximum value of 32.67 Million USD. This minimum value occurred in the early year, namely 2011 and the highest value was in 2020.
2. The foreign debt variable (X2) has an average value of 332.7 million USD with a minimum value of 219.6 million USD and a maximum value of 427.5 million USD.
3. The variable human development index (Z) has an average value of 70.00 with the lowest value being 67.09 and the highest being 72.29. The lowest value occurs at the beginning of the year and the highest occurs at the end of the year, this is because the HDI trend continues to increase throughout the year.
4. The variable economic growth (Y) has an average of 5.08 with the lowest value being 67.09 and the highest being 72.29. This lowest value occurred during the Covid-19 phase, but in 2021 there was a significant increase again.

Hypotesis Testing

Table 2. hypotesis test (H1 and H2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.435501	3.369287	-1.613250	0.1578
X1	0.018041	0.008515	2.118603	0.0784
X2	-2.175800	0.494932	-4.396158	0.0046
Z	5.064792	2.674341	1.893847	0.1071
R-squared	0.859609	Mean dependent var		0.692306
Adjusted R-squared	0.789413	S.D. dependent var		0.131089

http://ejournal.seaninstitute.or.id/index.php/Ekonomi
Jurnal Ekonomi, Volume 12, No 02, 2023
ISSN: 2301-6280 (print) ISSN: 2721-9879 (online)
JURNAL EKONOMI

S.E. of regression	0.060157	Akaike info criterion	-2.494559
Sum squared resid	0.021713	Schwarz criterion	-2.373525
Log likelihood	16.47280	Hannan-Quinn criter.	-2.627333
F-statistic	12.24590	Durbin-Watson stat	1.843224
Prob(F-statistic)	0.005725		

The test results show that there is a direct positive relationship between variable X1 (foreign investment) and Y (economic growth). This can be seen from the value of the T statistic (2.118603) > T.Table (1.895). This can be interpreted that foreign investment has a positive effect on economic growth. This is reinforced by the findings (Mebratau Seyoum, Rensui Whu, 2015) that foreign investment is strongly related to GDP. The same thing was also found by Nuraini, (2016); Rizky, Agustin Grisvia, (2022); Arianti & Mauzi, (2013).

Variable X2 (Foreign Debt) shows a direct negative relationship with variable Y (Economic Growth). This is shown by T.statistic (-4.396158) > from T.Table (1.895). That is, the more foreign debt decreases, the more economic growth increases, and vice versa. This is in line with the findings of Murniawati et al, (2021) and Le & Phan (2022).

Simultaneously, all variables have a positive influence on economic growth. This can be seen from the value of F. Statistics (12.24590) > F. Table (3.48). All variables have an influence of 78% on economic growth, apart from that it is influenced by other variables. This can be seen from the adjusted R-square value (0.789413).

Table 3. Hypotesis test (H3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22.95362	40.22602	0.570616	0.5890
X1	-0.558563	1.428721	-0.390953	0.7093
Z	-16.77808	30.28104	-0.554079	0.5996
M1	0.423628	1.073822	0.394504	0.7068

The results of testing the moderating variable (Human Development Index) at X1 (Foreign Investment) show the results of T-Statistic (0.394504) < T.Table (1.895). This shows that variable Z (IPM) cannot moderate the relationship between X1 (foreign investment) and Y (economic growth). In line with the findings (Adewumi, 2006) that FDI has no effect on the economy, this is due to various influencing factors such as national policies, investment concentration, and people's welfare. Andreica & Maricescu, (2002) explained that FDI must be supported by relevant infrastructure and competency conditions and integrated into international trade.

Table 3. Hypotesis Test (H4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-22.25370	7.066200	-3.149316	0.0198
X2	31.32897	12.63399	2.479737	0.0478
Z	17.74813	5.305633	3.345148	0.0155
M2	-24.49777	9.334019	-2.624568	0.0393

While testing the moderating variable (Human Development Index) at X2 (Foreign Debt) shows the results of T-Statistic (-2.624568) > T.Table (1.895). This shows that variable Z (HDI) can moderate the relationship between X2 (Foreign Debt) and Y (Economic Growth). In this study, the HLN variable which was moderated by HDI stated negative results. However, the value of the T statistic X2 increased from (-4.396158) to (-2.624568) after being given HDI moderation. This implies that the moderating variable has a positive impact on the relationship between X2 and Y. This happens if the government can adjust and properly manage the spending function and is followed by community efforts to reduce high debt levels and increase economic growth (Murched, 2017).

4. CONCLUSION

The results of this study indicate that foreign investment has a direct positive relationship with economic growth. Meanwhile, foreign debt has a negative relationship to economic growth. The relationship between the moderating variable, namely the human development index, can only explain the moderating relationship between foreign debt and economic growth. The results of statistical tests show that the HDI variable has a positive impact on the relationship between foreign debt and economic growth.

REFERENCES

[1] BKPM, "Pentingnya Peran Investasi dalam Pertumbuhan Ekonomi Indonesia di Kala Pandemi," *investindonesia.co.id*, 2022.
[2] DPMPTSP, "Indonesia Negara Tujuan Investasi Asing," *DPMPTSP BANTEN*, 2022.
[3] BKPM, "Indonesia Tetap Optimis, Investasi Penyokong Ekonomi di Masa Pandemi COVID-19," *Kementrian Investasi*, 2021.
[4] C. Andreica and D. L. Maricescu, *Foreign direct investment - support for development*, vol. 16, no. 11. 2002.
[5] Nuraini, "ANALISIS PENGARUH INVESTASI PENANAMAN MODAL DALAM NEGERI (PMDN) DAN PENANAMAN MODAL ASING (PMA) TERHADAP PERTUMBUHAN EKONOMI DI PROVINSI JAMBI," *J. Ilm. Univ. Batanghari Jambi*, vol. 16, no. 1, 2016, doi: 10.2307/2328243.
[6] M. I. Rizky, Agustin Grisvia, "Pengaruh Penanaman Modal Asing (PMA), Penanaman Modal Dalam Negeri Dan Belanja Langsung Terhadap Pertumbuhan Ekonomi Di Provinsi Papua," *J. Kaji. Ekon. dan Stud. Pembang.*, vol. 6, no. 3, pp. 9–16, 2022, doi: 10.56076/jkesp.v6i3.2165.
[7] F. Arianti and M. N. Mauzi, "Analisis Pengaruh Penanaman Modal Asing dan Penanaman Modal Dalam Negeri Terhadap Pertumbuhan Ekonomi: di Jawa Tengah 1990-2010," *Diponegoro J. Econ.*, vol. 2, no. 1, pp. 1–9, 2013.
[8] V. N. Balasubramanyam, M. Salisu, and D. Sapsford, "Foreign direct investment and growth in EP and IS countries," *Oxford J.*, vol. 106, no. 434, pp. 92–105, 1996, doi: 10.2307/2234933.
[9] U. A. and A. H. K. Zeshan Atique, Mohsin Hasnain Ahmad, "The Impact of FDI on Economic Growth under Foreign Trade Regimes : A Case Study of Pakistan [with Comments] Author (s): Zeshan Atique , Mohsin Hasnain Ahmad , Usman Azhar and Aliya H . Khan Source : The Pakistan Development Review , Winter 2004 , Vol," *Pak. Dev. Rev.*, vol. 43, no. 4, 2005.
[10] J. L. Mebratau Seyoum, Rensui Whu, "Towards an idea-centered, principle-base design to as creation approach support learning knowledge," *Springer*, vol. 57, no. 5, pp. 613–627, 2015, doi: 10.1007/sl.
[11] P. Todaro, *Pembangunan Ekonomi*. United Kingdom: Pearson Education, 2002.
[12] BAPPENAS, "Rencana Pemanfaatan Pinjaman Luar Negeri," 2020.
[13] F. Murniawati, I. Achmad, and I. Yulivan, "Pengaruh Utang Luar Negeri Dan Penanaman Modal Asing Terhadap Pertumbuhan Ekonomi : Analisis Ketahanan Ekonomi Pada Negara-Negara Gagal Bayar Utang the Effect of External Debt and Foreign Direct Investment on Economic Growth : Analysis of Economic Resilie," *J. Ekon. Pertahanan*, vol. 7, no. 2, pp. 169–191, 2021.
[14] dedi. junaedi, "Hubungan Antara Utang Luar Negeri Dengan Perekonomian Dan Kemiskinan: Komparasi Antarezim Pemerintahan," *Simp. Nas. Keuang. Negara,* vol. 1, no. 1, pp. 563–587, 2018.
[15] Fabiana Meijon Fadul, "External Debt and Economic Growth : The Case of Emerging Economy," *J. Econ. Integr.*, vol. 33, no. 1, pp. 1141–1157, 2019.
[16] A. M. Rasyidi *et al.*, "Teori human capital," *J. Theory Hum. Cap.*, no. 2017, pp. 1–15, 2020.
[17] S. S. Makki and A. Somwaru, "Agricultural & Applied Economics Association Impact of Foreign Direct Investment and Trade on Economic Growth : Evidence from Developing Countries Author (s): Shiva S . Makki and Agapi Somwaru Published by : Oxford University Press on behalf of the Agri," *Am. J. Agric. Econ.*, vol. 86, no. 3, pp. 795–801, 2004.
[18] K. Azam, "Role of human capital and foreign direct investment in promoting economic growth: Evidence from Commonwealth of dependent States," *Int. J. Soc. Econ.*, vol. 42, no. 2, pp. 98–111, 2015, doi: 10.1108/IJSE-05-2014-0092.
[19] M. Ramzan, B. Sheng, S. Fatima, and Z. Jiao, "Impact of FDI on economic growth in developing countries: Role of human capital," *Seoul J. Econ.*, vol. 32, no. 3, pp. 337–360, 2019.
[20] M. . Jhingan, *Ekonomi Pembangunan*. Jakarta: Erlangga, 2003.
[21] Hooshang Amirahmadi & Weiping Wu, "Foreign Direct Investment in Developing Countries," *Coll. Bus. , Tennessee State Univ.*, vol. 28, no. 2, pp. 167–190, 1994.
[22] A. L. Rachmadi, "Analisis Pengaruh Utang Luar Negeri Terhadap Pertumbuhan Ekonomi Indonesia (Studi Kasus Tahun 2001-2011)," *Anal. Pengaruh Utang Luar Negeri Terhadap Pertumbuhan Ekon. Indones.*, p. 18, 2013.
[23] J. Lotto and C. T. Mmari, "Domestic Debt and Economic Growth in Tanzania," *J. Econ. Manag. Sci.*, vol. 1, no. 1, p. p207, 2018, doi: 10.30560/jems.v1n1p207.

[24] & O. Aderu, Omolade, "External Debt and Economic Growth in Nigeria," *J. African Union Stud.*, vol. 8, no. 3, pp. 157–171, 2019.
[25] A. Nurkholis, "TEORI PEMBANGUNAN SUMBERDAYA MANUSIA:," pp. 1–16, 2016.
[26] Islahul amri and Misbahul Munir, "Peran Moderasi Human Capital Diantara Pengaruh PMA dan PMDN Terhadap Pertumbuhan Ekonomi," *Ekspansi J. Ekon. Keuangan, Perbank. dan Akunt.*, vol. 12, no. 1, pp. 65–76, 2020, doi: 10.35313/ekspansi.v12i1.1861.
[27] B. I. Primasary, "PENGARUH INVESTASI, PENGELUARAN PEMBANGUNAN, JUMLAH TENAGA KERJA, PELATIHAN TENAGA KERJA TERHADAP PERTUMBUHAN EKONOMI PROVINSI BALI," *EP UNUD*, vol. 10, no. 6, pp. 2371–2397, 2017.
[28] I. Amri, "Pengaruh Penanaman Modal Dalam Negeri dan Penanaman Modal Asing Terhadap Pertumbuhan Ekonomi dengan Human Capital Sebagai Variabel Moderasi," 2020.
[29] J. K. Plantin, "The Effect of Foreign Direct Investment on Colombia ' s Economic Growth and the Role of Human Capital : Does Foreign Direct Investment Foster Growth ?," Univestity of San Francisko, 2021.
[30] D. Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan Tindakan*. 2013.
[31] BPS, "IPM," *Badan Pusan Statistik*, 2022.
[32] T. H. Le and L. T. T. Phan, "Examining the Non-Linear Impact of External Debt on Economic Convergence," *J. Econ. Integr.*, vol. 37, no. 3, pp. 377–422, 2022, doi: 10.11130/jei.2022.37.3.377.
[33] S. Adewumi, "The Impact of FDI on Growth in Developing Countries: An African Experience," *JSTOR*, vol. 74, no. 4, 2006.
[34] M. Murched, "Human capital , public debt and long-term economic growth Maya," 2017.