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Article

The Impact of Macroeconomic Variables on the Real Economic Growth in Indonesia

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Abstract: This study empirically examines and analyzes the impact of several macroeconomic indicators on economic growth, namely the extent to which the variables of poverty, human development index (HDI), foreign direct (FDI) and domestic investments (DMI) affect gross regional domestic product (GRDP) at constant prices in 2010 according to expenditure in Indonesia. By using panel data regression and data sourced from 32 provinces throughout Indonesia, the results show that poverty has a negative but not significant effect, FDI has a positive and significant effect, and HDI has a positive and significant effect. On the other hand, Domestic Investment has a positive but not significant effect on GRDP. In an effort to increase the value of GRDP, HDI, and investment (FDI and HDI) that can reduce poverty, the government, the private sector, and the community play an active role in cooperating in planning and implementing effective and efficient strategic program activities, including maintaining social security stability and politics, sustainable reform in all sectors by encouraging the use of domestic products, empowering elements of society including Micro, Small and Medium Enterprises, facilitating various vocational skills training for productive workers and drafting investment-friendly licensing governance regulations. The development of human resources must accompany economic development to reduce the negative impact of economic growth.

Keywords: economic growth; poverty; human development; domestic investment; foreign investment

1. Introduction

Economic growth is a country's economic condition continuously improving from time to time to a better state than before. Economic growth is also defined as growing an economy's productive capacity, which increases national income (Porter, 2000). Economic growth is a sign of the success of economic development in people's lives (Thompson, 2018). Economic growth in Indonesia for several years has experienced positive developments; from 2013 to 2021, the percentage of economic growth almost every year was above 5%, only in 2016, it experienced a slight decline of 4.88%, and the worst occurred in 2020 when there was a recession due to the Covid 19 pandemic (Mursalina et al., 2022). At that time, economic growth fell drastically from 5.17% in 2019 to -2.07%. The economic recession, or at least the decline in

economic growth, was also experienced by almost or even all countries worldwide, including large countries such as China, France, Russia, the United States, Japan, Europe, and others. According to the International Monetary Fund (IMF) October 2021 World Economic Outlook, global economic growth slowed to roughly -3.2% in 2020, with a 5.9% recovery projected for 2021 and 4.9% for 2022 (Jackson, 2021).

Sanchez (2021) divides 170 countries into three groups according to per capita income, namely low, middle, and high income. The pandemic has had a significant and more prominent impact on GDP growth in middle-income countries. The impact on GDP growth is less significant in the poorest countries due to less stringent lockdowns and rich countries due to more aggressive economic policies. Apart from sluggish economic growth, one of the pandemic's negative impacts is the increasing poverty rate. The Covid-19 pandemic has caused an increase in the number of poor people in Indonesia by almost 2.7 million. However, in 2021, with various policies taken by the government and related components of the nation.

Along with the slowdown due to the pandemic, the economic growth had returned to a positive path of 3.69%. The COVID-19 pandemic has affected the regional economy of the Indonesian region. It is proven by the results of the significant Mc Nemar statistical test processing for the 34 provinces in Indonesia (Oeliestina, 2021). In South Africa, the Covid-19's long-term consequences would wreak havoc on GDP, as predicted by the 'Slow' and 'Long' recovery scenarios (Arndt et al., 2020). Figure 1 shows Indonesia's economic growth from 2013 to 2021.

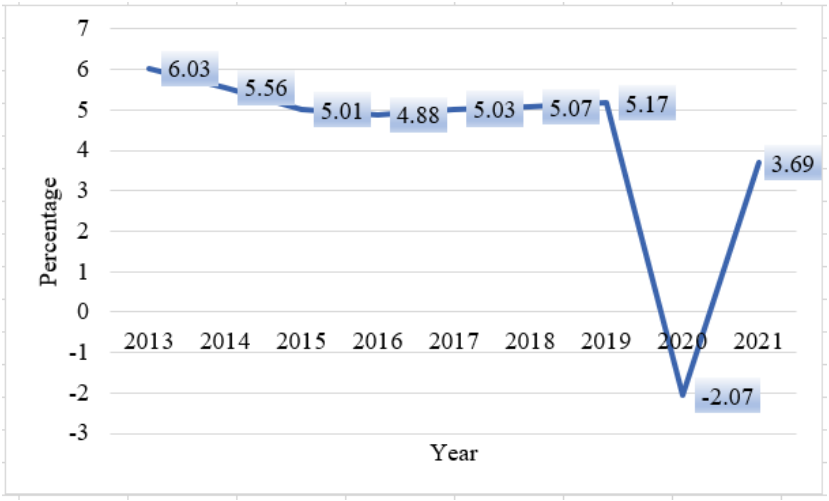

Figure 1. Indonesia's Economic Growth in 2013-2021.

Economic growth is an important factor that illustrates people's income and regional growth rate as measured by the Gross Regional Domestic Product (GRDP) per capita. GRDP is the total gross added value generated by all regional economic sectors (Zulham et al., 2019). Calculating GRDP is intended to aid in formulating regional policies or plans, evaluating development outcomes, and providing information that can describe regional economic performance (Sukono, Saputra, et al., 2019; Sukono, Subartin, et al., 2019). See fluctuations in economic growth in the region in real terms from year to year are illustrated through the presentation of GRDP on the basis of constant prices regularly; positive growth indicates an increase in the economy. On the other hand, if a negative indicates a decrease in economic growth, it is usually accompanied by accumulation or resource use and state funds (Ananta, 1993).

GRDP is one of the essential indicators for determining the economic conditions in a certain area over a given period, either at current or constant prices (Zulham et al., 2019). GRDP is the amount of added value produced by all business units in a certain area or the total value of final goods and services produced by all regional economic units. GRDP, based on current prices, portrays the additional value of products and services computed using current year prices. In contrast, GRDP based on constant prices depicts the added value of these goods and services calculated using prices prevailing in one year as the base year. The ability of economic resources, shifts, and the economic structure of a region is determined using GRDP at current prices. Meanwhile, constant GRDP calculates actual economic growth from year to year or growth unaffected by price changes (Mursalina et al., 2022).

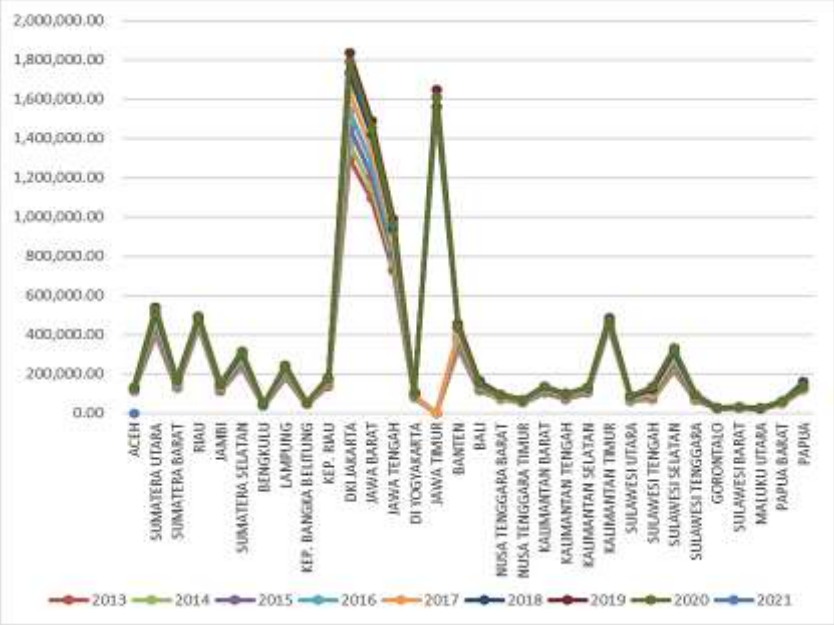

Figure 2. Gross Regional Domestic Product (GRDP) by Expenditure from 2013 to 2021.

Figure 2 displays a total of 32 provinces with the 2013-2021 observation year. The highest GRDP at constant price value according to expenditure is in three provinces consistently from year to year, namely DKI Jakarta, East Java, and West Java, while the lowest is North Maluku, Gorontalo, and West Sulawesi.

2. Literature Review

2.1. Gross Regional Domestic Product (GRDP)

One indicator of the success of the implementation of development that can be used as a benchmark at a macro level is economic growth. However, even though it has been used as an indicator of development, economic growth is still general and does not yet reflect the capabilities of the individual community. There is little doubt that economic growth increases a country's overall wealth, allowing it to expand its capacity in the fight against poverty, unemployment, and other social issues. As a result, in many countries around the world, a high degree of economic growth is one of the key objectives of economic policy (Sharipov, 2015). Regional development is also expected to have a positive impact on economic growth. Regional economic growth can be reflected by changes in GRDP in a region (Afrizal, 2013). One indicator of the success of development implementation that can be used as a benchmark at a macro level is economic growth as reflected in changes in GRDP (Gross Regional Domestic Product) in a region. GRDP is all added value arising from various economic activities in an area, regardless of the owner of the production factors, whether it belongs to residents of that area or belongs to residents of other areas (Kairupan, 2013).

2.2. Poverty

Poverty means a condition in which a person or group does not have the ability, freedom, assets, and accessibility for their future needs and is very vulnerable to risks and stresses caused by disease and sudden increases in food prices and school fees (Parsudi, 2000). Meanwhile, according to Chamsyah (2006), poverty is a living condition that refers to a state of deficiency or difficulty in meeting the necessities of life. A person is said to be poor if he has difficulty meeting his basic needs. According to Badan Perencanaan Pembangunan Nasional (1993), poverty is a condition of complete deprivation that occurs not because of the will of a poor person but a condition that cannot be avoided with the power of what it is. Thus, poverty is a condition of a person's life. It refers to a state of deficiency in meeting his basic life needs and inability to enjoy his life in terms of health, worship according to his religion, education, work, adequate income and standard of living.

2.3. Human Development Index

The Human Development Index (HDI) is used to measure the achievement of human development in a region. The process of gaining and expanding the number of people with the skills, education, and experience necessary for a country's economic and political development is known as human development capital formation (Maulida & Silvia, 2016). As identified by Ranis et al. (2000), there is a strong two-way relationship between human development and economic growth. Economic growth offers a means to support the improvement of sustainable human development where sustainable development in the value of human development is vital as a determinant of economic growth. According to Ranis et al. (2006), HDI is useful for comparing human development performance between countries and regions. HDI is a metric that indicates how citizens of a region might benefit from development as part of their rights to income, health, and education, among other things.

2.4. Foreign Direct Investment

Foreign Direct Investment (FDI) is an investment activity to conduct business in the Republic of Indonesia, carried out by foreign investors who use fully foreign capital and those in joint ventures with domestic investment. FDI is one of the efforts to increase the amount of capital for economic development sourced from abroad (Mathiyalagan & Padli, 2022). Salvatore (2020) explains that FDI consists of 1) Portfolio investment, namely investments that involve only financial assets, such as bonds and stocks, denominated or valued in the national currency. This portfolio or financial investment activity usually occurs through financial institutions such as banks, investment fund companies, pension foundations, etc. Foreign Direct Investment is a foreign investment that includes investment into real assets in the form of construction of factories, procurement of various kinds of capital goods, purchase of land for production purposes, and so on.

2.5. Domestic Investment (DMI)

Domestic Investment (DMI) is an investment activity in which domestic investors use domestic funds to conduct business in the Republic of Indonesia's territory. According to Harjono (2007), domestic investment is the use of capital by the state or national private or foreign private domiciled in Indonesia, which is used to carry out business activities for businesses that encourage economic development in general. Domestic direct investment (domestic investment) is a type of direct investment that contributes directly to development. Direct investment will boost economic growth, technology, knowledge transfer, and job creation, lowering unemployment and increasing people's purchasing power (Supancana, 2006).

3. Materials and Methods

3.1. Materials

This study is designed using a quantitative approach through panel data analysis. The panel data combines cross-section and time-series data (Beck, 2008; Yaffee, 2003). The data used is GRDP at constant prices according to expenditure, the number of poverty, HDI, FDI, and DMI from 32 provinces from 2013 to 2021. The data was obtained from the Central Bureau of Statistics, the Investment Coordinating Board (Badan Koordinasi Penanaman Modal, 2021), Indonesian Bank, and the other literature. The number of observations is 288 and data is processed by assisting EVIEWS software.

3.2. Methods

The number of cross-sectional data in this study covers 32 provinces throughout Indonesia except for North Kalimantan and Maluku Provinces due to the absence of supporting data, while the time series data is for 10 years, namely 2013-2021. This study's endogenous or dependent variable is GRDP, while poverty, HDI, FDI, and Domestic Investment are exogenous or independent variables. In this study, it will be seen to what extent the variables of poverty, HDI, FDI, and Domestic Investment influenced GRDP at constant prices in 2010 according to expenditure in Indonesia. The effect that will be seen is direct. The direct influence between the poverty variable on GRDP, the HDI variable on the GRDP, the FDI variable on the GRDP, and the Domestic Investment variable on the GRDP. The relationship between the studied variables is described in Figure 3:

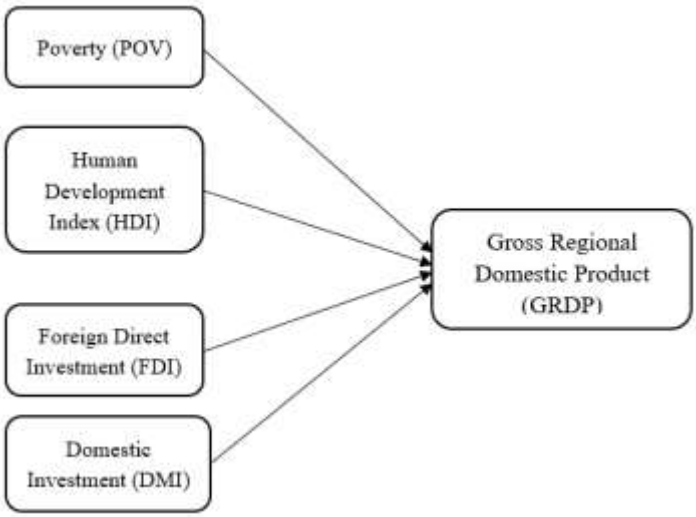

Figure 3. Research Framework.

Figure 3 shows only a one-panel data regression equation model that will be carried out to obtain parameter coefficients. The general form of the linear regression model can be written as follows (Silvia, 2021):

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + e_i \quad (1)$$

The above equation (Eq. 1) can be formulated as follows:

$$GRDP_{it} = \alpha_{1it} + \beta_{11} POV_{it} + \beta_{12} HDI_{it} + \beta_{13} FDI_{it} + \beta_{14} DI_{it} + e_1 \quad (2)$$

Where $GRDP_{it}$ is Gross Regional Domestic Product (for the i-province and t-time), POV_{it} is Poverty (for the i-province and t-time), $\alpha 1it$ is Constanta, β_{11}, β_{12}, β_{13}, β_{13}, β_{14} is Coefficient regression, HDIit is Human Development Index (for the i-province and t-time), FDI_{it} is Foreign Direct Investment (for the i-province and t-time), DI_{it} is Domestic Investment (for the i-province and t-time), and e1 is Error term.

In order to execute panel data regression, it is necessary to select the best model first, such as the Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM). The Chow test is utilised to establish if a model is a CEM or a FEM. CEM is the null hypothesis, whereas FEM is the alternative hypothesis. The Hausman test is used to choose between FEM and REM as a model if REM is accepted. FEM is the alternative hypothesis, while REM is the null hypothesis. A Lagrange multiplier test is used to assess whether CEM or REM models should be utilized. The null hypothesis is CEM, whereas the alternative hypothesis is REM.

4. Results

The presentation of descriptive statistics aims to provide an overview of research data in the form of mean, median, maximum, minimum, and standard deviation. The results of descriptive analysis for variable data on GRDP, poverty, HDI, FDI, and Domestic Investment in 32 provinces throughout Indonesia in 2012-2020 with a total of 288 observations are presented in **Table 1**.

Table 1. Results of descriptive statistics analysis.

Statistics	GRDP	POV	HDI	FDI	DMI
Mean	306418.0	82972.26	69.68903	1.24E+13	8.67E+12
Median	130726.8	37857.00	69.79000	5.65E+12	3.75E+12
Maximum	1856301.	486582.0	81.11000	8.68E+13	6.21E+13
Minimum	18208.74	6662.000	56.25000	2.76E+10	3.60E+09
Std. Dev.	420345.4	116171.4	4.338122	1.72E+13	1.24E+13
Skewness	2.170845	2.419113	-0.026825	2.285302	2.277048

Kurtosis	6.757411	7.682978	3.877488	8.356136	7.883164
Jarque-Bera	395.6209	544.0644	9.274364	594.9434	535.0210
Probability	0.000000	0.000000	0.009685	0.000000	0.000000
Observations	288	288	288	288	288

The GRDP variable has a minimum value of 18208.74, a maximum value of 1856301, a mean value of 130726.8, and a standard deviation value of 420345.4, indicating that the mean value is less than the standard value and that the value distribution is less evenly distributed. The poverty variable has a minimum value of 6662, a maximum value of 486582, a mean value of 82972.26, and a standard deviation of 116171.4, indicating that the mean value is less than the standard value. Thus, the distribution of values is less evenly distributed.

The HDI has a minimum value of 56.25 and a maximum value of 81.11, with a mean value of 69.689 and a standard deviation value of 4.3381, indicating that the mean value is greater than the standard value and that the distribution of the values is evenly distributed. The FDI variable has a minimum value of 2,760, a maximum value of 86,800, a mean value of 12,400, and a standard deviation of 17,200, indicating that the mean value is less than the standard value. Thus, the distribution of values is less evenly distributed. The FDI variable has a minimum value of 2,760, a maximum value of 86,800, a mean value of 12,400, and a standard deviation of 17,200, indicating that the mean value is lower than the standard value indicating that the distribution of values is less uniformly distributed. While the Domestic Investment variable has a minimum of 3.6, a maximum of 6.2100, a mean of 8,670, and a standard deviation of 12,400, the mean value is lower than the standard value, indicating that the distribution of values is less equally distributed.

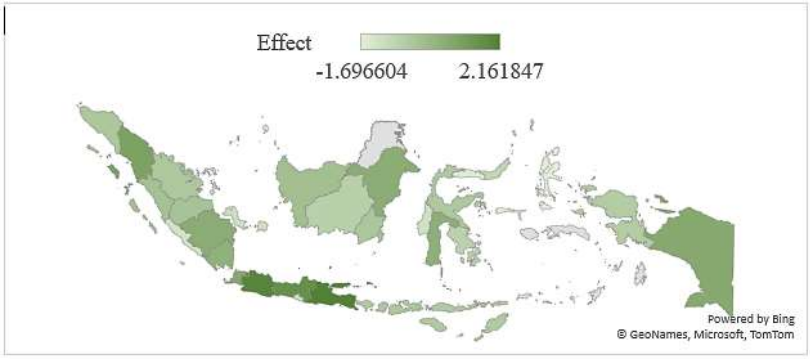

Figure 4. Estimated economic growth in 2013-2021 without other variables effect.

Figure 4 shows cross-sectional data from 32 provinces in Indonesia. It shows the condition of economic growth from 2013 to 2021 without any other variables. There is a significant disparity in economic growth between provinces on the island of Java and provinces on other islands. Several provinces with high initial economic growth coefficients or parameters include DKI Jakarta, Central Java, West Java, and East Java. The darker the area's color on the map, the higher the start of economic growth and vice versa. The faded color means that the economic growth in the region is low, so it can be concluded that economic growth between regions has not been evenly distributed.

Table 2. Model selection criteria

Testing	**Stat value**	**Prob.**
Chow Test	800.063	0.000
Hausman Test	192.058	0.000
Breusch Pagan LM Test	None	None
Model Selection	Fixed Effect Model	

Table 2 displays the results of the Chow and Hausman tests, which were used to select the best model on panel data. The Chow test results show that the P-value in the equation 1 model is 0.000, implying that the P-value alpha is 5 percent or 0.05. It demonstrates that H0 is rejected, and Ha is accepted, indicating that the Fixed Effect Model was chosen (FEM). The Hausman test results show P-value Chow and Hausman

tests, indicating that the FEM model was chosen. In Table 3, the existing variables, including GRDP, poverty, HDI, FDI, and Domestic Investment analyzed using the OLS (Ordinary Least Square). This study was carried out with natural logarithms for the estimation technique and model. It aims to reduce violations of normality, heteroscedasticity, and multicollinearity (Fachrurrozi et al., 2021).

Table 3. Results of panel data regression for fixed effect model (FEM)

Variable	Coefficient	Std. error	t-statistic	Prob.
Log (POV)	-0.006	0.016	-0.375	0.707
Log (HDI)	5.199	0.179	28.981	0.000
Log (FDI)	0.020	0.004	4.674	0.000
Log (DMI)	0.007	0.003	2.255	0.024
C	-10.856	0.754	-14.394	0.000
R square	0.998	Log-likelihood	486.420	
Adj. R square	0.998	F statistic	4602.507	
SE of regression	0.047	Probability	0.000	

Table 3 shows the result of panel data regression. This study found that the variable of human development index (HDI), foreign (FDI), and domestic investments (DMI) have a significant positive effect on regional economic growth (GRDP). Besides that, poverty has no significant effect on GRDP. The value of the coefficient's regression of HDI is 5.199, std. error is 0.179, t-stat is 28.981, and significant at 1 percent. Assuming an increase in HDI of 1 percent would increase GRDP by as much as 5.199 percent. Next, FDI coefficient regression is 0.020, std. error is 0.004, t-stat is 4.674, and significant at the level of 1 percent. It means that assuming an increase in FDI of 1 percent would give an effect on increasing GRDP by as much as 0.020 percent. The regression coefficient of DMI is 0.007, std. error is 0.003, t-stat is 2.255, and significant at 5 percent. Assuming an increase in DMI of 1 percent would increase GRDP by as much as 0.007 percent.

5. Discussion

The result of this study indicated that poverty has a negative but not significant effect on GRDP. When poverty decreases, this causes GRDP to increase. These findings contradict Mariyanti & Mahfudz (2016), who found a causal relationship between economic growth and poverty. Prasad (1998) stated that economic growth accompanied by stability in a country's social, institutional, and political aspects will potentially reduce poverty levels in the long term. Le Goff & Singh (2013) suggested that the economic growth of a country or region can reduce poverty levels if the institutional elements of the country or region are well organized. However, this is different from Akoum (2008), who stated that countries with high economic growth would have high poverty rates. Sidiq (2020) showed a negative relationship between poverty and economic growth. It means that the lower the poverty rate, the more Indonesia's economic growth will increase.

As for the HDI variable, the P-value <0.05 shows that HDI has a positive and significant effect on GRDP. It means that when the HDI increases, it causes an increase in GDP. The results of this study are the same as Rahman et al. (2020), who conducted research in 25 developed and 25 developing countries from 2000 to 2014 and found that HDI has a significant positive effect on economic growth in the case of developed and developing countries. Ulas & Keskin (2017) concluded a positive correlation between HDI and economic performance. The FDI variable has a P-value of 0.05 and a coefficient of 0.021, implying that foreign investment or from abroad has a positive and significant effect on GRDP. These findings are consistent with the findings of Gherghina et al. (2019), who found that FDI is one of the contributors to the country's economic growth. Li & Liu (2005) examined whether foreign direct investment (FDI) affects economic growth using panel data for 84 countries from 1970 to 1999. FDI not only directly stimulated economic growth but also indirectly did so through its interactions. The interaction of FDI with human capital has a significant positive impact on economic growth in developing countries, whereas FDI with a technology gap has a significant negative impact.

The domestic investment (DMI) variable has a P-value greater than 0.05 and a coefficient value of 0.007, implying that domestic investment positively affects economic growth (GRDP). The study's result is consistent with Agustini & Kurniasih (2017) and Hismendi et al. (2022). They found that domestic

investment positively and significantly impacts the local economic growth of districts/cities in West Kalimantan. Bakari (2018) claimed that domestic investment has a negative impact on economic growth in the long run. On the other hand, domestic investment led to economic growth in Algeria in the short term. The findings of Saleem & Zaheer (2018) showed that domestic investment has a negative impact on economic growth. As a result of a lack of skilled labor and appropriate investment, the labor force participation rate and domestic investment have little impact on Pakistan's economic growth.

High economic growth or GRDP is one of the main development goals at the national and regional levels. However, this is not enough to guarantee that poverty will decrease, and people's welfare will increase evenly. Therefore, economic growth must be accompanied by income distribution, regional development, priority strategic activity programs for poverty reduction, increasing HDI, and optimal efforts by all parties. It aims to utilize both domestic and foreign investment to benefit society in general so that all levels of society can enjoy the positive impact of growth and High economic growth.

6. Conclusions

In conclusion, this study has successfully identified the impact of macroeconomic variables on the real economic growth in Indonesia. Also, this study found that increasing the value of GRDP directly and positively impacts poverty alleviation. The economic growth is not only aimed at pursuing high-value achievement figures but, more importantly, paying attention to efforts to equalize economic growth and development of welfare among regions. Concerning the priority scale and the character and potential conditions that exist in each of these areas. Sustainable development of human resources by encouraging improvements in the quality and quantity of vocational training, skills, and expertise, ensuring the availability of educational, health facilities and infrastructure, and maintaining the stability of purchasing power or people's incomes. It is followed by the allocation of targeted investments both from within and outside the country and leading to job openings, labor-intensive and touching the real sector are real steps that the government must take in collaboration with all components of the nation so that economic growth that impacts welfare for the community can be achieved.

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References

Afrizal, F. (2013). *Analisis Pengaruh Tingkat Investasi, Belanja Pemerintah dan Tenaga Kerja Terhadap PDRB di Provinsi Sulawesi Selatan Tahun 2001-2011*. Universitas Hasanuddin.

Agustini, Y., & Kurniasih, E. P. (2017). Pengaruh Investasi PMDN, PMA, dan Penyerapan Tenaga Kerja Terhadap Pertumbuhan Ekonomi dan Jumlah Penduduk Miskin Kabupaten/Kota di Provinsi Kalimantan Barat. *Jurnal Ekonomi Bisnis Dan Kewirausahaan*, *6*(2), 97–119.

Akoum, I. F. (2008). Globalization, Growth, and Poverty: The Missing Link. *International Journal of Social Economics*, *35*(4), 226–238. https://doi.org/10.1108/03068290810854529

Ananta, A. (1993). *Ciri demografis kualitas penduduk dan pembangunan ekonomi*. Lembaga Demografi.

Arndt, C., Davies, R., Gabriel, S., Harris, L., Makrelov, K., Modise, B., Robinson, S., Simbanegavi, W., Van Seventer,

D., & Anderson, L. (2020). Impact of Covid-19 on the South African economy. *Southern Africa-Towards Inclusive Economic Development Working Paper*, *111*.

Badan Koordinasi Penanaman Modal. (2021). *Realisasi Investasi di Indonesia Sepanjang Tahun 2020*. https://www5.bkpm.go.id/id/publikasi/siaran-pers/readmore/2413001/68601

Badan Perencanaan Pembangunan Nasional. (1993). Panduan Program Inpres Desa Tertinggal. *Jakarta: Bappenas*.

Bakari, S. (2018). The impact of domestic investment on economic growth new policy analysis from Algeria. *Bulletin of Economic Theory and Analysis*, *3*(1), 35–51. https://doi.org/10.25229/beta.337367

Beck, N. (2008). Time-series-cross-section methods. *The Oxford Handbook of Political Methodology*, 475–493.

Chamsyah, B. (2006). *Teologi penanggulangan kemiskinan*. RMBooks.

Fachrurrozi, K., Fahmiwati, F., Hakim, L., Aswadi, A., & Lidiana, L. (2021). Pengaruh Kemiskinan dan Pengangguran Terhadap Kriminalitas di Indonesia Di Tahun 2019. *Jurnal Real Riset*, *3*(2), 173–178.

Gherghina, Ștefan C., Simionescu, L. N., & Hudea, O. S. (2019). Exploring foreign direct investment–economic growth nexus—Empirical evidence from central and eastern European countries. *Sustainability*, *11*(19), 5421.

Harjono, K. D. (2007). *Hukum Penanaman Modal : Suatu Tinjauan Terhadap Pemberlakuan Undang Undang No. 25 Tahun 2007 tentang Penanaman Modal*. PT RajaGrafindo Persada. http://repository.uki.ac.id/1026/1/Hukum Penanaman Modal.pdf

Hismendi, H., Masbar, R., Nazamuddin, N., Majid, M. S. A., & Suriani, S. (2021). Sectoral stock markets and economic growth nexus : Empirical evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, *8*(4), 11–19. https://doi.org/10.13106/jafeb.2021.vol8.no4.0011

Jackson, J. K. (2021). *Global economic effects of COVID-19*. Congressional Research Service. https://sgp.fas.org/crs/row/R46270.pdf

Kairupan, S. P. (2013). Produk Domestik Regional Bruto (PDRB), Inflasi Dan Belanja Daerah Pengaruhnya Terhadap Kesempatan Kerja Di Sulawesi Utara Tahun 2000-2012. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *1*(4), 2206–2216. https://doi.org/10.35794/emba.1.4.2013.3431

Le Goff, M., & Singh, R. J. (2013). *Can trade reduce poverty in Africa?* World Bank, Washington, DC. https://openknowledge.worldbank.org/bitstream/handle/10986/12165/wps6327.pdf?sequence=1&isAllowed=y

Li, X., & Liu, X. (2005). Foreign direct investment and economic growth: an increasingly endogenous relationship. *World Development*, *33*(3), 393–407. https://doi.org/10.1016/j.worlddev.2004.11.001

Mariyanti, T., & Mahfudz, A. A. (2016). Dynamic circular causation model in poverty alleviation: Empirical evidence from Indonesia. *Humanomics*, *32*(3), 275–299. https://doi.org/10.1108/H-02-2016-0016

Mathiyalagan, Y., & Padli, J. (2022). Impacts of Terrorism on Economic Growth and Foreign Direct Investment in Developing Asian Countries: Malaysia, Indonesia and Philippines. *International Journal of Finance, Economics and Business*, *1*(1), 57–66.

Maulida, S., & Silvia, V. (2016). Indeks Pembangunan Manusia Pasca Pemekaran Pada Enam Kabupaten di Provinsi Aceh. *Jurnal Ilmiah Mahasiswa Ekonomi Pembangunan*, *1*(2), 389–399.

Mursalina, M., Masbar, R., & Suriani, S. (2022). Impact of Covid-19 Pandemic on Economic Growth of the Tourism Sector in Indonesia. *International Journal of Quantitative Research and Modeling*, *3*(1), 18–28. https://doi.org/10.46336/ijqrm.v3i1.261

Oeliestina, O. (2021). Pengaruh Pandemi Covid 19 Terhadap Perekonomian Propinsi Jambi. *Jurnal Apresiasi Ekonomi*, *9*(1), 54–66. https://doi.org/10.31846/jae.v9i1.340

Parsudi, S. (2000). Alternatif Penanganannya Ditujukan Dalam Seminar Forum Perkotaan. *Jakarta: Prasana Wilayah*.

Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic*

Development Quarterly, *14*(1), 15–34. https://doi.org/10.1177/089124240001400105

Prasad, B. C. (1998). The woes of economic reform: poverty and income inequality in Fiji. *International Journal of Social Economics*, *25*(6/7/8), 1073–1094. https://doi.org/10.1108/03068299810212469

Putri, D. T., Azwardi, A., Marwa, T., & Andaiyani, S. (2018). Does Government Spending Drive Regional Economic Growth? *International Journal of Economics and Financial Issues*, *8*(5), 261.

Rahman, R. A., Raja, M. A., & Ryan, C. (2020). The impact of human development on economic growth: a panel data approach. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3526909

Ranis, G., Stewart, F., & Ramirez, A. (2000). Economic growth and human development. *World Development*, *28*(2), 197–219. http://www.econ.yale.edu/~granis/papers/cp0546.pdf

Ranis, G., Stewart, F., & Samman, E. (2006). Human development: beyond the human development index. *Journal of Human Development*, *7*(3), 323–358. https://doi.org/10.1080/14649880600815917

Saleem, M., & Zaheer, R. (2018). A study on influence of domestic investment on the economic growth during 1980-2016. *Journal of Global Economics*, *6*(3), 2–5. https://doi.org/10.4172/2375-4389.1000302

Salvatore, D. (2020). *Ekonomi internasional*. Salemba Empat.

Sanchez, J. M. (2021). *COVID-19's Economic Impact around the World*. The Regional Economist; Federal Reserve Bank of St. Louis. https://www.stlouisfed.org/publications/regional-economist/third-quarter-2021/covid19s-economic-impact-world#:~:text=Although the COVID-19 pandemic,%25 in high-income ones.

Sharipov, I. (2015). Contemporary economic growth models and theories: A literature review. *CES Working Papers*, *7*(3), 759.

Sidiq, S. (2020). *Pengaruh Tingkat Partisipasi Angkatan Kerja Wanita terhadap Pertumbuhan Ekonomi di Negara Indonesia Tahun 2003-2018*.

Silvia, V. (2021). *Statistika Deskriptif* (1st ed.). Penerbit Andi.

Sukono, S., Saputra, J., Subartini, B., Purba, J. H. F., Supian, S., & Hidayat, Y. (2019). An Application of Genetic Algorithm Approach and Cobb-Douglas Model for Predicting the Gross Regional Domestic Product by Expenditure-Based in Indonesia. *Engineering Letters*, *27*(3).

Sukono, S., Subartin, B., Napitupulu, H., Saputra, J., & Hidayat, Y. (2019). Forecasting Model of Gross Regional Domestic Product (GRDP) Using Backpropagation of Levenberg-Marguardt Method. *Industrial Engineering & Management Systems*, *18*(3), 530–540. https://doi.org/10.7232/iems.2019.18.3.530

Supancana, I. B. R. (2006). *Kerangka Hukum dan Kebijakan Investasi Langsung di Indonesia*. Ghalia Indonesia.

Thompson, M. (2018). Social capital, innovation and economic growth. *Journal of Behavioral and Experimental Economics*, *73*, 46–52. https://doi.org/10.1016/j.socec.2018.01.005

Ulas, E., & Keskin, B. (2017). Is there a relation between HDI and economic performances? In D. Procházka (Ed.), *New trends in finance and accounting* (Springer P, pp. 61–70). Springer International Publishing AG 2017. https://doi.org/10.1007/978-3-319-49559-0_6

Yaffee, R. (2003). A primer for panel data analysis. *Connect: Information Technology at NYU*, *8*(3), 1–11.

Zulham, T., Sirojuzilam, S. B., & Saputra, J. (2019). Supply Chain Strategy for Convergence of Regional Economic Growth East Coast North Sumatera, Indonesia. *Int. J Sup. Chain. Mgt Vol*, *8*(5), 325–336.