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DETERMINANTS OF ECONOMIC GROWTH IN LOW-INCOME COUNTRIES

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ABSTRACT

Economic growth is the process of increasing production capacity in a country. Low production capacity will cause per capita income and Gross National Income (GNI) in the country is also low. The study aims to determine the effect of trade openness, corruption perception index, foreign investment, human development index, and foreign debt on economic growth in low-income countries during the period 2016-2020 using the regression of panel data. The results the Fixed Effects approach showed that trade openness has a positive effect on economic growth, while foreign debt has a negative effect on economic growth. Meanwhile, the perception index of corruption, foreign investment, and human development index was found to have no effect on economic growth in low-income countries in 2016-2020.

KEYWORDS: *corruption perception index; economic growth; foreign investment; human development index; trade openness*

1 INTRODUCTION

Development is a process of change that covers the entire social system. Economic development is an effort to improve the standard of living of a nation as measured by the high and low per capita income. Economic development includes several processes and policies implemented by the government to improve the economy, politics, and social welfare, including the fields of health and education, so that every country in the world will try to carry out development in its country. (Purnomo & Mudakir, 2019).

Economic growth is the process of increasing production capacity in a country. Low production capacity will cause per capita income to also be low. According to a World Bank report in Steinbach (2019), since 2001, the number of Low-Income Countries (LICs) where annual per capita income is at ≤ 1,025 US$ has decreased by more than half, to 31 in 2020 from 64 in 2001. The majority of LICs are countries that are experiencing armed conflicts such as Afghanistan, Syria, Sudan, and Somalia.

Wibowo (2018) explained in his research that an increase in GDP reflects an increase in remuneration for production factors used in production activities in an economy. In lower income countries or low-income countries, there are many problems such as low international trade activities which indicate the low level of consumption of their people and the lack of investment flows that cause development to tend to be uneven. In addition, this condition is exacerbated by the high number of cases of corruption by leaders in the country concerned, so that the funds that should have been used to carry out the development are reduced in value. Various problems both from within the country and abroad resulted in insufficient GDP revenues so that economic growth was not as planned.

One of the factors affecting GDP and economic growth in a country is the level of corruption in the country. Corruption is still an inexhaustible global hot issue to discuss and debate. Corruption is considered a major challenge in combating poverty levels and achieving people's welfare. In addition, the eradication of corruption is used as the core goal of the Sustainable Development Goals (SDG's), because of its impact that can affect the economy in a country (Ichvani & Sasana, 2019).

In their research, Lutfi et al. (2020) found that low-income countries are very synonymous with high corruption cases. The level of corruption in a country can be measured through the Corruption Perseption Index (CPI), which is a combined index of various international surveys and corruption assessments collected by various leading institutions. This index refers to 13 surveys from independent institutions. The corruption perception index has a scale of 0-100, where 0 means the country is very corrupt (high corruption) and 100 indicates that the country is clean from corrupt practices (very clean).

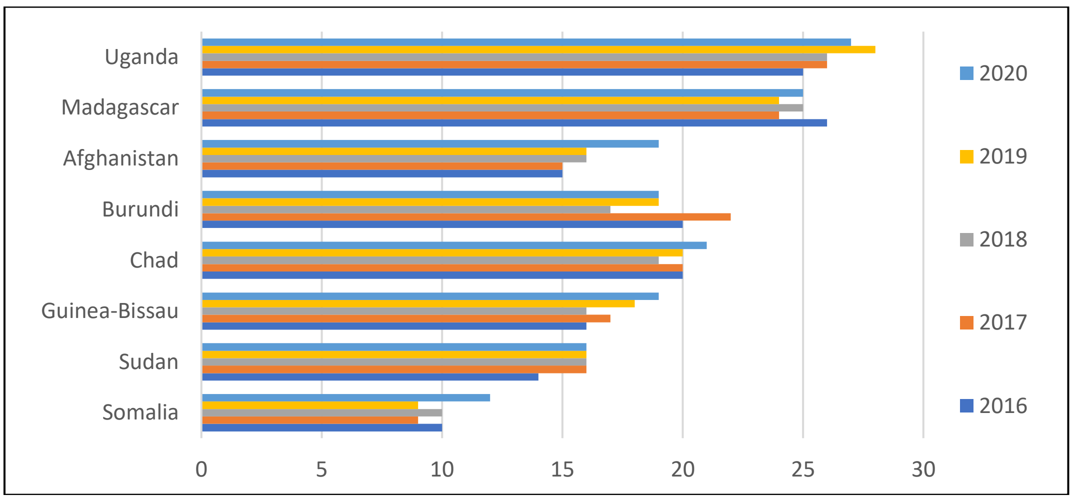

Figure 1: Corruption Perseption Index, Transparency International (2021)

The CPI in 2016-2020 in several LICs is presented in Figure 1. It is noticed that the CPI in LICs is very low, so it belongs to the category of very corrupt. Most of these are very corrupt countries that are on the African continent. This needs to be noted because Africa has an abundance of natural resources. There are so many diamond and gold mines operated by European and United States companies, in addition to having connectivity with governments in each country, they also have more capital sources to carry out mining operations. This condition seems to be a field of corruption for leaders in every country who play with the right to explore natural resources in the country they lead.

Capital is one of the important factors that encourage economic growth and development. Foreign Direct Investment (FDI) is one of the best forms of capital in financing and investing in industrial projects. FDI plays an important role in the economic growth of countries around the world. FDI directly affects the scenario of employment, production, prices, income, imports, exports, general welfare of receiving countries, and balance of payments and serves as one of the important sources in encouraging economic growth (Soebagyo & Panjawa, 2016). The economic growth also related to economic openness in a country. In openness, a party or state may consume goods and services that are not available in the country. In addition, superior products in the country can also be sold to the international market which will increase national income and economic growth (Jumhur et al., 2018).

According to the official report of the United National Development Program (UNDP) which states that between economic growth and human development are two things that cannot be separated, influencing one another. The Human Development Index (HDI) is an important indicator to measure success in efforts to build the quality of human life, HDI can determine the level or level of development of a country (Faizah et al., 2022). Thus, if the HDI in that country is high or increasing, then its economic growth will also increase (Latuconsina, 2017).

The last factor that is thought to have an effect on economic growth is foreign debt. Countries that fall into the LICs category, have problems with their very low incomes. One of the ways to deal with the limited funds to carry out development is this foreign debt, so that development can be realized quickly and the targeted economic growth can be achieved immediately. However, the use of these foreign debt funds must be carefully considered because of the obligation to pay interest on loans made (Insanu & Purwanti, 2020).

Based on the described background, this study aims to analyze the direction and magnitude of the influence of trade openness, corruption perception index, foreign investment, human development index, and foreign debt on economic growth in Low-Income Countries (LICs) during the 2016-2016 period. 2020 by using panel data regression.

Open trade is one of the solutions to improve the economy. Many of the LICs have reaped the benefits of greater trade integration by entering into free trade agreements. In sub-Saharan African countries, membership in free trade areas has proven to significantly increase intra-regional trade (Burundi, Kenya, Rwanda, Tanzania), and support FDI inflows, industrialization, and economic integration in the region (Morris & Staritz (2017). Bhattacharyya & Mandal (2016) also found that the India-ASEAN agreement that came into force in 2009 has benefited the lics that are members. Investment in human capital and infrastructure development increased the ratio of total investment realization to GDP, so economic growth in Bhutan, Bangladesh and India increased and the three countries were no longer included in the LICs in 2020.

The International Monetary Fund (IMF) has implemented various policies to ease the debt burden on poor countries included in the LICs. One of them was the elimination of the debt burden in the previous year and two years thereafter in 2013. Such debt burden reduction policies have helped put government finances in LICs for the better as well as supported macroeconomic stability and spurred economic growth in LICs (Marcelino & Hakobyan, 2014).

During the period 1997-2016 in five ASEAN countries (Indonesia, Malaysia, Thailand, Philippines and Vietnam), Ichvani & Sasana (2019) using a regression panel data with a Fixed Effects approach found that the index of perceptions of corruption, consumption levels, government spending, and trade openness had a positive effect on economic growth. The relationship pattern for the realization of these four variables and economic growth is linear-linear. Soekapdjo & Esther (2019) found that the level of capital formation, natural resources, and population negatively affect economic growth. In addition, inflation and total savings have a positive effect on the economic growth of Malaysia, Indonesia, and Philippines for the 2000-2016 period.

Yuliana et al. (2019) using a regression of panel data with a Fixed Effects approach found that the value of investment and road infrastructure had a positive effect on economic growth, while the inflation rate did not affect the economic growth of 15 regencies or cities in South Sumatra Province during the period 2007-2016. Fathoni, et al. (2017) found that Intra-ASEAN exports and Intra-ASEAN FDI had a positive effect on ASEAN-5 GDP growth (Indonesia, Malaysia, Singapore, Philippines, and Thailand) during 2006-2015. Meanwhile, Hussin & Saidin (2012) with the Common Effects approach found that foreign investment, economic openness, and capital formation had a positive effect on economic growth in ASEAN-4 (Malaysia, Thailand, Indonesia, and Philippines) during the period 1981-2008.

Harahap et al., (2019) analyzed the effect of fiscal deficits, exports, imports, and the number of MSMEs on the economic growth of 34 provinces in Indonesia for the 2010-2017 period. The findings state that the value of imports and the number of MSMEs have a positive effect on economic growth, while exports have no effect on economic growth. Rudi *et al*. (2016) found that foreign debt and foreign investment have a positive effect on economic growth. However, different results were found by Basten, *et al.* (2021) where in his research, foreign debt was found to have a negative effect on economic growth.

2 MATERIALS AND METHODS

This study will observe the influence of trade openness, corruption perception index, foreign investment, human development index, and external debt on economic growth in Low-Income Countries (LICs) in 2016-2020 using panel data regression. The econometric model used in this study is a modification of the article Ichvani & Sasana (2019) with the following equation:

$$GROWTH_{it} = \beta_0 + \beta_1 T0_{it} + \beta_2 CPI_{it} + \beta_3 FDI_{it} + \beta_4 HDI_{it} + \beta_5 logDEBT_{it} + \varepsilon_{it} \quad (1)$$

GROWTH is the level of economic growth as measured through data on the growth of Gross Domestic Product (GDP) constant prices in 2015, TO is trade openness which is measured through the ratio of the value of exports plus the value of imports then divided by GDP, CPI symbolizes the corruption perception index, FDI is the realization of foreign investment, HDI is the human development index, and DEBT which is the total foreign debt in countries including Low-Income Countries in 2020.

The research data is panel data, which is a combination of time series data and cross section data. Cross-section data includes 22 Low-Income Countries (LICs) in 2020 (Afghanistan, Burkina Faso, Burundi, Central African Republic, Chad, Democratic Republic of the Congo, Ethiopia, Gambia, Guinea, Guinea-Bissau, Liberia, Madagascar, Malawi, Mali Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Sudan, Togo, and Uganda). Meanwhile, the time series data covers the 2016-2020 observation range. There are several countries included in the LICs that were not included in the study because of the availability of data in the country concerned which was not reported in the official World Bank report. Likewise with the research range that does not include the latest time series data, namely 2021 because most of the official reports or data on variables from the World Bank as the main reference in this research are only available until 2020.

The data used include economic growth as measured through Gross Domestic Product (GDP) growth according to constant prices in 2015, level of trade openness, corruption perception index, foreign investment, human development index, and foreign debt. Data were obtained from the World Bank, International Monetary Fund (IMF), Transparency International, and the United National Development Program (UNDP).

The stages of estimating the panel data regression model include the Common Effects Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM) approaches; selection of the best estimator models with the Chow Test and the Hausman Test; test the goodness of the model; and test the validity of the influence on selected estimator models.

3 RESULTS AND DISCUSSION

Based on the results of the model selection test, it is known that the selected model is the Fixed Effects Model (FEM). The full of FEM estimation results are presented in Table 1 and 2.

Table 1 Fixed Effects Model Estimation Results

$GROWTH_{it}$= 104,1007 +0,1733 TO_{it} -0,0856 CPI_{it} +0,0000 FDI_{it} +40,7965 HDI_{it} -5,8449 $\log(DEBT)_{it}$					
	(0,0000)*	(0,5463)	(0,2970)	(0,6162)	(0,0115)**
R^2= 0,6737; DW = 2,1905; F-stat = 6,5937; Prob.(F-stat) = 0,0000					

Source: EViews regression output results, processed. Description: *Significant on α = 0.01; ** Significant at α = 0.05; Significant at α = 0.10.

Tabel 2 Effects and Constants of lowest and highest Fixed Effects Model

Category	Country	Effects	Constants
Highest	Ethiopia	19,72	123,82
Lowest	Guinea-Bissau	-11,17	92,93

Source: EViews regression output results

Table 1 shows the probability that the F test of the goodness of the model has a value of 0.0000 < 0.01; so that the model used in this study exists and the independent variables used are trade openness, corruption perception index, foreign investment, human development index, and foreign debt collectively affect economic growth in Low-Income Countries (LICs). The value of R^2 is 0.6737, which means that variations in economic growth can be explained by trade openness, corruption perception index, foreign investment, human development index, and foreign debt of 67.37%. Meanwhile, the remaining 32.63% is explained by other variables outside the study.

Trade openness has a positive sign. This means that trade openness has a positive effect on economic growth. The coefficient of 0.1733 means that if trade openness increases by 1%, then economic growth will also increase by 0.17%. The coefficient of external debt is -5.8449, which means that if external debt increases by 1%, it will reduce economic growth by 0.05%. Meanwhile, the corruption perception index, foreign investment, and human development index were found to have no effect on economic growth.

Trade openness has a positive effect on economic growth. Openness is believed to be able to encourage economic growth of a country because it can provide opportunities to export goods whose production factors use abundant resources and import goods whose production factors are scarce or expensive if produced domestically. Moreover, in this study, there are many countries with abundant natural resources, but only in certain products such as mining products. In addition, many countries do not have good enough agricultural products due to barren soil conditions, so they still depend on imported products. Thus, trade openness will increase and this will reflect an increase in the economy and production and consumption of people in these countries. The results in this study are supported by findings Wibowo (2018) which state that trade openness can increase state revenues and spur economic growth. Fitriani et al. (2021) found the opposite result, namely that trade openness actually had a negative effect on economic growth because the value of imports was higher than the country's income from export activities.

The corruption perception index in this study was found to have no effect on economic growth. Corruption has become a serious problem for low-income countries. The corruption that has occurred has entered the realm of state leaders, many leaders in low-income countries live in a state of wealth but the people are still hungry. This systematic practice of corruption seems to complement economic problems such as low employment and high levels of unemployment and poverty. In addition, corruption in the state is not only in the form of money, but the sale and purchase of land in the management of available natural resources, so that even though the real amount of corruption is not so high, state revenues are not optimal and do not affect economic growth. This result is supported by research Lutfi et al. (2020) which states that the perception index has no effect on economic growth in Africa.

The results of this study state that foreign investment has no effect on economic growth. This is due to the low flow of foreign investment to low-income countries. Foreign investors will think twice if they are going to invest their capital because low-income countries are considered to be unpromising for their economy, so they will not provide a high enough return on investment. Novriansyah (2018) with his research also finds the same thing, where the low realization of foreign investment does not affect economic growth.

The human development index was also found to have no effect on economic growth. Humanitarian crises and low welfare in low-income countries have become classic problems from time to time. This condition affects the quality of human beings in the country such as the low quality of the workforce and health conditions which in the end the productivity of the workforce is also low, so it does not affect economic growth. Research that supports this result is Windasari et al. (2021) which states that low human capital has no effect on economic growth that occurs.

The results of this study indicate that foreign debt has a negative effect on economic growth in low-income countries. Debt or foreign loans are a snare for countries that cannot maximize funds from these loans. The loan will result in interest on the loan and must be paid in the future. What is even more ironic is that loans made to carry out development are also corrupted by policy makers and in the end development is not carried out optimally and does not affect economic activity and economic growth. The results of this study are supported by the findings of Basten et al. (2021) which state that foreign debt affects economic growth.

Table 3 shows the inter-country constants where Ethiopia with a constant of 123.82 is the highest compared to other LICs countries. That is, related to the effect of trade openness, corruption perception index, foreign investment, human development index, and foreign debt on economic growth, Ethiopia tends to have the highest economic growth. Meanwhile, Guinea-Bissau became the lowest with a constant of 92.93. Thus, it can be said that Guinea-Bissau tends to have the lowest economic growth compared to other Low-Income Countries.

4 CONCLUSION

Based on the results of research that has been carried out, governments in countries that are included in the low-income group must encourage the economy by increasing trade activities with other countries. In addition, it is necessary to control the level of foreign debt and monitor its utilization in order to ensure the acceleration of development. The limitation of this research is the use of variables and research objects which are still limited due to data availability problems. This research can also be continued by discussing the long-term effects of some of the variables studied.

REFERENCES

Amanda Fitriani, S., Budiman Hakim, D., & Widyastutik. (2021). Analisis Kointegrasi Keterbukaan Perdagangan dan Pertumbuhan Ekonomi di Indonesia (Cointegration Analysis of Trade Openness and Economic Growth In Indonesia). *Jurnal Ekonomi Dan Manajemen*, *12*(2), 103–116. https://doi.org/10.22212/jekp.v12i1.2033

Faizah, S. A. A., Perwithosuci, W., Hidayah, N., & Abidin, A. Z. (2022). *Women ' s Literacy Rate and Women's Labor Participation in ASEAN*. *23*(1), 56–62.

https://doi.org/10.23917/jep.v23i1.17183
Basten, E. Van, Hudayah, S., & Gani, I. (2021). Pengaruh Utang luar negeri terhadap Pertumbuhan ekonomi dan Dampaknya pada Pengangguran Terbuka di Indonesia. *Forum Ekonomi*, *23*(1), 340–350.
Ichvani, L. F., & Sasana, H. (2019). Pengaruh Korupsi, Konsumsi, Pengeluaran Pemerintah dan Keterbukaan Perdagangan terhadap Pertumbuhan Ekonomi di Asean 5. *Jurnal REP (Riset Ekonomi Pembangunan)*, *4*(1), 61–72. https://doi.org/10.31002/rep.v4i1.1342
Insanu, F. M., & Purwanti, E. Y. (2020). Utang Pemerintah Dan Fiscal Sustainability Dalam Paradigma Ricardian Fiscal Regime Di Indonesia. *Jurnal Dinamika Ekonomi Pembangunan*, *3*(1), 1–26.
Jumhur, J., Nasrun, M. A., Agustiar, M., & Wahyudi, W. (2018). Pengaruh Jumlah Uang Beredar, Ekspor dan Impor terhadap Inflasi (Studi Empiris Pada Perekonomian Indonesia). *Jurnal Ekonomi Bisnis Dan Kewirausahaan*, *7*(3), 186. https://doi.org/10.26418/jebik.v7i3.26991
Latuconsina, Z. M. Y. (2017). Analisis Faktor-faktor yang Mempengaruhi Indeks Pembangunan Manusia Kabupaten Malang Berbasis Pendekatan Perwilayahan dan Regresi Panel. *Journal of Regional and Rural Development Planning*, *1*(2), 202. https://doi.org/10.29244/jp2wd.2017.1.2.202-216
Lutfi, A. F., Zainuri, Ekonomi, F., & Herman C. D. (2020). *Dampak Korupsi Terhadap Pertumbuhan Ekonomi : Studi Kasus 4 Negara di ASEAN (Impact Corruption on Economic Growth : A Case Study of 4 Countries in ASEAN)*. *7*(1), 30–35.
Novriansyah, M. A. (2018). Pengaruh Pengangguran dan Kemiskinan Terhadap Pertumbuhan Ekonomi di Provinsi Gorontalo. *Gorontalo Development Review*, *1*(1), 59–73.
Purnomo, R. N., & Mudakir, B. (2019). Analisis Pengaruh Keterbukaan Ekonomi Terhadap Pertumbuhan Ekonomi (Studi Kasus: Asean Tahun 2007 – 2017). *Jurnal Dinamika Ekonomi Pembangunan*, *2*(2), 20–35. https://doi.org/10.14710/jdep.2.2.20-35
Rudi, M. I., Rotinsulu, T. O., & Tenda, A. (2016). Pengaruh Utang Luar Negeri Dan Penanaman Modal Asing Terhadap Pertumbuhan Ekonomi Indonesia Periode Tahun 2009.3-2014.4. *Jurnal Berkala Ilmiah Efisiensi*, *16*(2), 325–333.
Soebagyo, D., & Panjawa, J. L. (2016). Pengaruh Sektor Moneter Terhadap Jakarta Islamic Index. *The 4th University Research Coloquium*, *408*, 41–49.
Soekapdjo, S., & Esther, A. M. (2019). Determinasi Pertumbuhan Ekonomi Berkelanjutan di Asean-3. *Jurnal Ilmiah Ekonomi Dan Bisnis*, *16*(2), 176–182. https://doi.org/10.31849/jieb.v16i2.2978
Steinbach, R. (2019). Growth in Low-Income Countries: Evolution, Prospects, and Policies. *Policy Research Working Paper*, *8949*, 1–23. https://doi.org/10.1596/1813-9450-8949
Wibowo, E. W. (2018). Analisis Ekonomi Digital Dan Keterbukaan terhadap Pertumbuhan Gdp Negara Asean. *Jurnal Lentera Bisnis*, *7*(2), 66. https://doi.org/10.34127/jrlab.v7i2.235

Windasari, M. D., Ningsih, S., & Pravasanti, Y. A. (2021). Analisis Pengaruh Aglomerasi Industri, Angkatan Kerja, dan Human Capital Investment terhadap Pertumbuhan Ekonomi kabupaten/kota di Provinsi Jawa Tengah tahun 2017-2019. *Jurnal Akuntansi Dan Pajak*, *22*(1), 1–7. https://jurnal.stie-aas.ac.id/index.php/jap/article/view/2871

Yuliana, S., Bashir, A., & Rohima, S. (2019). The Effect of Investment Toward Economic Growth in The Local Economy. *Jurnal Ekonomi Dan Studi Pembangunan*, *11*(1), 28–39. https://doi.org/10.17977/um002v11i12019p028