The Effect of Human Development Index on Corruption in ASEAN Countries

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Abstract:- **This study aims to analyze Human Development Index and GDP on Corruption Perception Index ASEAN Countries from 2010-2019. This study uses Corruption Perception Index as the dependent variable, and the independent variables are Human Development Index and GDP. The data used in this study are panel data (time series data for eleven years from 2010-2019 and cross-section data for as many as 10 data representing ASEAN countries). This study's analysis method uses a fixed effect-panel data regression model. Panel data regression analysis is used to determine the effect of independent variables on the level of corruption perception index. The estimation results in this study show that the estimation results show that the Human Development Index (HDI) variable has a positive and significant effect at the actual level of five percent on the level of corruption perception index in ASEAN countries. At the same time, the GDP variable has a negative and significant effect at the actual level of five percent on the level of corruption perception index in ASEAN countries.**

Keywords:- *Corruption, Human Development Index, GDP, ASEAN.*

I. INTRODUCTION

The success of a country's development can be seen from the country's success in reducing poverty, minimizing income inequality, and the welfare of the community. One of the indicators that determine the success of development is human resources. According to the UNDP, one way to measure a country's welfare level is with the Human Development Index. The Human Development Index is an essential aspect of the quality of economic development. Good quality human resources can increase high productivity, thereby reducing poverty. According to Mankiw (2020), human resource development can be done by improving the quality of human capital, including education and health. Improvements in education and health of human resources are expected to expand opportunities to achieve a decent life. Human capital, which refers to progress in education and health, is a fundamental development goal in a region.

Economic growth is also an indicator of successful economic development. Economic growth reflects a country's economy, measured by national income Gross Domestic Product (GDP) or Gross Regional Domestic Product (GRDP). Economic growth is a continuous increase in output in the long term. High and sustainable economic growth is an essential condition or a necessity for continuing economic development and welfare improvement. HDI data for ASEAN countries can be seen in Figure 1 below:
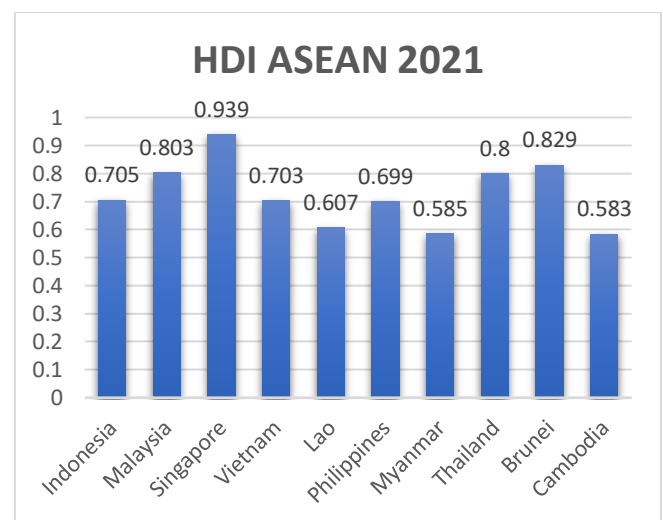

Fig. 1. Human Development Index ASEAN 2021
Source: UNDP, 2023.

Based on data from UNDP, it is known that the highest Human Development Index in 2021 is Singapore at 93.9 percent, and the lowest is Cambodia at 58.3 percent. Meanwhile, Indonesia has an HDI of 70.5 percent. The difference in HDI values reflects that there is still a welfare gap in ASEAN countries.

One of the obstacles to economic development is corruption. Corruption is one of the problems that can hinder the progress of a country because the impact of corruption will disrupt the economy because the allocation of government budgets for the community's welfare does not run

effectively and efficiently. According to the 1994 Malta Conference and other sources, corruption is an extraordinary crime. It is said to be a great crime because of its enormous negative impact on the state or government, the public, consumers, and entrepreneurs.

One of the significant adverse impacts of corruption is on the quality of human resources. Crime has reduced the rate of human resources and hindered economic growth. Various research sources say that corruption has an impact that can hamper economic growth, namely: Reducing the state budget, which will affect reducing the state's ability to reduce corruption and reduce the amount of government spending, especially in the field of social security and public welfare payments, disrupting national defense and political stability, due to policymakers who do not carry out national goals properly, corruption reduces corporate tax revenues and activities that are pushed to the informal sector by taking excessive rents and taxes are reduced in exchange for gifts to tax officials, corruption diverts talent into rent-seeking: officials who should be able to engage in productive activities are switched to taking rent fees and the occurrence of talent miss allocated, namely placing people not in place.

Conversely, the quality of human resources in a country will be inversely proportional to the level of corruption in that country. The higher the quality of human resources, as reflected in the higher the HDI in a country, the more heightened public awareness of the adverse effects of corruption. As a result, people will demand that the government take the fight against corruption seriously so that the level of corruption will be lower. Research on this result is still controversial, so it needs to be re-examined.

One of the benchmarks many countries use to present the level of corruption is the Corruption Perception Index (CPI). The Corruption Perception Index is represented as a weighting of 0-100. This means that the higher the CPI value of a region, the cleaner it is from corruption, while the lower the CPI, the more corrupt it is. Crime directly affects several governance and economic factors, which in turn causes economic growth to slow down and lead to poverty. Based on the above background, this paper wants to see the effect of the quality of human resources reflected in HDI and GDP on The Corruption Perception in ASEAN countries.

II. LITERATURE THEORY

Many studies show that corruption harms a country's human resources quality. Some studies show corruption has an indirect effect on the quality of human resources, and some studies show a direct impact on the quality of human resources.

Studies that show indirect effects include research: Palash (2018), Campos et al. (2010), and Akcay (2006); the indirect impact of corruption on the quality of human resources is through economic growth and investment. Corruption reduces economic growth. Decreased economic growth leads to high unemployment and thus also increases poverty. Poverty has led to low human resource quality

because people experiencing poverty cannot afford adequate education and pay for good health facilities.

Corruption also affects the quality of human capital indirectly through investment interest. A high level of corruption in a country leads to low investment interest as investors have to incur extra costs to invest in the country. Less investment has created fewer employment opportunities, resulting in a high unemployment rate. The high unemployment rate has led to a high poverty rate. Furthermore, the high poverty rate has caused the quality of human resources to be low, as described earlier.

Studies that show the direct effect of corruption on the quality of human resources include research: Mauro (1998), Gupta, Davoodi, and Alonso, Terme (1998), The effect of corruption on the quality of human resources through government spending or spending in the health and education sectors. Corruption reduces government spending on education and health. This results in some people needing help to access health and education services and some being able to access education and health services but with lower quality services. The impact of this is the low quality of human resources.

Most studies that examine HDI in developed countries, such as the European Union, find that life expectancy identifies a positive relationship with HDI. The highest level of HDI will reduce poverty and improve health and education systems. The corruption perception index has a positive impact on HDI. This means that in countries with the lowest index, citizens and resident companies, investors have more confidence in the policies taken by the government, which benefit development.

On the other hand, several studies examine the impact of the Human Development Index (HDI) on the level of corruption as measured by the Corruption Perceptions Index (CPI). The theoretical basis for this argument is that the higher the quality of human resources, the higher the HDI in a country and the more heightened public awareness of the adverse effects of corruption. As a result, people will demand that the government take the fight against corruption seriously so that the level of corruption will be lower.

Dila Angelia's study (2018) taking locations in Asian democratic countries found a positive effect of the Human Development Index (HDI) on the Corruption Perceptions Index. This means that the higher the HDI, the higher the Corruption Perception Index, which means the higher the quality of human resources as reflected by the HDP, the lower the level of corruption because the higher the Corruption Perception Index, the lower the level of corruption in a country.

Another study from Dirwan Ahmad (2019), which examines the impact of the number of higher education institutions and the Human Development Index on efforts to reduce corruption in Indonesia, finds something different. The study results show no significant effect of the number of

higher education institutions on the level of corruption in Indonesia.

Gabriela's writing (2022) explains that the higher the quality of human resources in a country, the lower the level of corruption in a region or country. Logically, the higher the quality of human resources in an area, the higher the public's awareness of the adverse effects of corruption, so that they will be intolerant of corruption.

III. RESEARCH METHOD

The analysis method used in this research is multiple regression with panel data. This study uses regression analysis from previous research. The dependent variable in this study is the level of corruption (Corruption Perceptions Index), and the independent variables are Human Development Index (HDI) and Gross Domestic Product (GDP). The data used in this study are secondary, namely data on the Human Development Index and the Corruption Perceptions Index in ASEAN member countries in the 2010-2019 timeframe. The data is taken from publications published by the World Bank and Transparency International. The similarities in this study are as follows:

$$Y_{it} = \beta_0 + \beta_1 \ln(X1_{it}) + \beta_2 \ln(X2_{it}) + \varepsilon_{ijt}$$

where:
β_0 = constant (intercept)
Y = CPI
X1 = HDI
X2 = GDP
ε_{ijt} = random error.

IV. RESULT

Multiple regression analysis with panel data (fixed effect model) was used to estimate the effect of the Human Development Index and GDP on the level of corruption in ASEAN countries (Indonesia, Malaysia, Laos, Singapore, Philippines, Brunei Darussalam, Thailand, Vietnam, Myanmar, and Cambodia) for the period 2010-2019.

Table 1. Result Estimation With Fix-Effect Model

Variable	Koefisien	t-ratio (signif)
konstanta	-10,15967	0,0000
Lnx1	4,319761	0,0000
Lnx2	-0,18351	0,0124
R-square	0,967072	
Adj. R-square	0,967072	
F-ratio	234,9513	
Jumlah variabel signifikan	2 dari 2 variabel (100%)	
N	100	
Dw	0,748542	

Source: Secondary Data, Processed, 2022.

The normality test aims to test whether, in the regression model, the confounding or residual variables have a normal distribution. Judging from the Jarque-Bera value of 3.465612,

less than 5.99, and with a probability value of 0.176788 which is more than α = 0.05, the data accepts the null hypothesis, and it can be concluded that the data is usually distributed.

The multicollinear test determines whether there is perfect intercorrelation between the independent variables used in the regression equation. In this study, it can be seen from the correlation test to test the presence or absence of multicollinearity. The correlation estimation results show that the correlation value between independent variables is less than 0.80. This means that the correlation value is smaller than 0,80, so this model has no multicollinearity.

The autocorrelation test aims to test the presence or absence of confounding errors in a certain period with mistakes in the previous period in the regression model—decision-making on the lack of autocorrelation using the Durbin-Watson Test Bound. Based on the fixed effect model research results, the Durbin Watson (d) value is 0.748542. From the Durbin-Watson test, it is known that the dL and du values with the number of independent variables 1 and 100 are dl (1.6337), du (1.7152), 4-du (2.2848), and 4-dl (2.3663). d value fixed effect model of 0.523997, then the decision-making is that the data reject H0 and there is autocorrelation.

The heteroscedasticity test aims to test whether, in the regression model, there is an inequality of variance from the residuals of one observation to another. If the variance of the residuals of one statement to another comment remains, it is homoscedasticity, and if it is different, it is called heteroscedastic. The GLS (General least square) method essentially gives weight to the data variation used, so by using GLS, the problem of heteroscedasticity and autocorrelation can be overcome. Because in estimating the model given the treatment of cross-section SUR (PCSE) standard errors and covariance, the assumptions of heteroscedasticity and multicollinearity can be ignored.

The T-statistical test shows how far the influence of each independent variable individually in explaining the variation in the dependent variable. The T-test is seen from the comparison between the T-statistic value and the T-table of 1.984723 and the probability value of the T-statistic with an actual level of 0.05. The estimation results show that the HDI and GDP variables have a t-statistic value> t-table and the prob value. T-statistic < the significance degree of 0.05, thus rejecting H0 and accepting H1, which means that these variables significantly impact the level of corruption.

V. HYPOTHESIS TEST

A. HDI Effect on Corruption

The Human Development Index (HDI) coefficient shows a positive and significant effect at a significant level of 0.05, meaning that any increase in the Human Development Index (HDI) will increase corruption participation in ASEAN countries.

The results of this study are similar to Nimri's research (2022), where HDI has a positive effect on the Corruption Perception Index in Jordan. Most studies that examine HDI in

developed countries, such as the European Union, find that life expectancy identifies a positive relationship between CPI and HDI. High life expectancy reduces poverty and improves health and education systems. The Corruption Perception Index has a positive impact on HDI.

B. GDP Effect on Corruption

Based on the estimation results, it is known that the GDP coefficient has a negative and significant effect at the 0.05 significance level. This result means that any increase in GDP will reduce corruption participation in ASEAN countries.

Li and Wu (2010) studied statistical data from 65 countries and argued that trust in corruption networks facilitates economic growth and reduces negative economic impact. Finally, Mustapha (2014) ran several statistical tests in a panel data framework to show that GDP has a negative effect on Corruption Perception Index. (2003) explain that corruption negatively impacts the Corruption Perception Index.

According to Chetwynd et al. (2003) explain that corruption has an impact on poverty by first affecting economic growth factors. If the CPI value decreases so that the level of corruption increases, it will directly reduce investment in the economy, create market distortions, damage competition, cause inefficiencies characterized by increased business costs, and increase income inequality. In this case, these economic growth factors will ultimately increase poverty.

VI. CONCLUSION AND SUGGESTION

A. Conclussion

Based on the results of research on the effect of the Human Development Index (HDI) and Gross Domestic Product (GDP) on The Corruption Perception Index in ASEAN countries, the following conclusions can be drawn:

1. The estimation results show that the HDI variable has a positive and significant effect at the actual level of five per cent on The Corruption Perception in ASEAN countries. It means that the higher the HDI, the lower the corruption level in ASEAN Countries

2. The estimation results show that the GDP variable has a negative and significant effect at the actual level of five per cent on The Corruption Perception in ASEAN countries. It means the higher GDP, the lower the corruption level in ASEAN Countries

B. Suggestion

Based on the conclusions of the research, some conditions are not optimal for eradicating corruption in ASEAN countries. Furthermore, to obtain optimal results to support the overall economy, some efforts must be made by various related parties in the fight against corruption.

REFERENCES

[1]. Al-Nimri, A. (2022). The Impact of Financial Corruption on Economic Performance. *World Economics*, *23*(2).

[2]. Amira Mohamed Emara, 2020, The Impact of Corruption On Human Development in Egypt, Asian Economic and Financial Review, Vol. 10, No. 5, 574-589.

[3]. Chetwynd, E., Chetwynd, F., & Spector, B. (2003). Corruption and poverty: A review of recent literature. *Management Systems International*, *600*, 5-16.

[4]. Dila Angelia (2018), *The Influence of Democrazy Index and Human Development Index on Corruption Perception Index in Asian Democrazy Country*, unpublished Bachelor Thesis at Andalas University, Padang

[5]. Dirwan Ahmad (2019), The Effect of Education against Corruption in Indonesia, *OIDA International Journal of Sustainable Development*, 12 (1). pp. 53-64. ISSN 1923-6662

[6]. Eglantina HYSA, 2011, Corruption and Human Development Correlation in Western Balkan Countries, E u r o E c o n o m i c a, Issue 4(30)/ 2011

[7]. Gabriela (2022), *Tindak Pidana Korupsi Mencerminkan Kualitas Sumberdaya Manusia Suatu Negara*, available at https://kumparan.com/gabriellacandraap/tindak-pidana-korupsi-mencerminkan-kualitas-sumber-daya-manusia-suatu-negara-1yMfbrr6XkB#:~:text=Kualitas%20sumber%20daya%20manusia%20memiliki,semakin%20meningkat%2C%20begitu%20juga%20sebaliknya.

[8]. Guntur Yudo Hartono, Dwi Ari Purwanto, Makmur Supriyatno, 2022, Pengaruh Korupsi Terhadap Indeks Pembangunan Manusia 2010- 2021, Jurnal Kewarganegaraan Vol. 6 No. 3 Oktober 2022

[9]. Mankiw, N. G. (2020). *Principles of economics*. Cengage Learning.

[10]. Syahrul Hanafi, 2018, Pengaruh Korupsi Terhadap Pembangunan Manusia di Indonesia, Wahana Islamika: Jurnal Studi Keislaman al-Ihkâm, V o l . 4 N o . 1 A p r i l 2 0 1 8

[11]. Transparency. 2022. "Database". www.transparency.org. (March 19, 2022).

[12]. United Nations Development Programme. 2023. "Human Development Index". https://hdr.undp.org/. (May 1, 2023).

[13]. Yusuf Kurniawan, Ririn Tri Ratnasari, Hindah Mustika 2020, The Corruption and Human Development to Economic Growth Of OIC Countries , Jurnal Ekonomi dan Bisnis Islam Volume 6, No.2, July – December 2020

[14]. World Bank. 2022. "Database". https://data.worldbank.org/ . (March 19, 2022).