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The Effect of Fiscal Decentralization, GDP Per Capita, Government Expenditure and Corruption on Human Development Index

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Abstract: One way to measure the success of human development in a country is to use the Human Development Index. Some previous studies tested Fiscal Decentralization on Human Development Index. This study aims to examine the effect of Fiscal Decentralization, GDP per capita, Government Expenditure and Corruption Level on Human Development Index. This research is quantitative descriptive research using panel data. The sample of this study consisted of 48 provincial governments throughout Indonesia for the period 2021-2022, the method used was purposive sampling. Statistical testing using EVIEWS 12. The results of the study Fiscal Decentralization, GDP per capita, Government Expenditure and Corruption have no effect on the Human Development Index.

Keywords: Human Development Index, Fiscal Decentralization, GDP per capita, Government Expenditure, Corruption

1. Introduction

The Human Development Index is one way to measure the success of human development in a country. According to UNDP, the Human Development Index measures human development achievements based on a number of basic quality of life components. The Human Development Index (HDI) is a global measure of living standards, illiteracy, life expectancy, and education. The purpose of the Human Development Index is to assess strengths and determine whether a country is developed, developing, or undeveloped. (Hutagaol et al., 2024).

The development of the Human Development Index (HDI) in all provinces in Indonesia has increased compared to the previous year. The province with the highest HDI value is DKI Jakarta province (81.65), while the province with the lowest HDI value is still occupied by Papua province (61.39). This means that the range between the highest and lowest HDI is recorded at 20.26.

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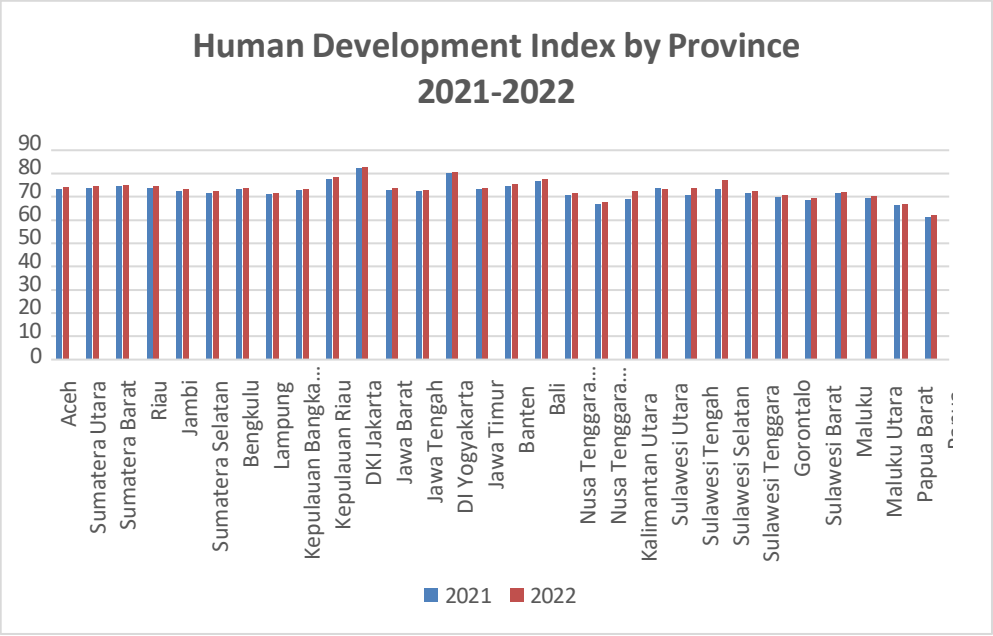

Figure 1: Development of Human Development Index in 2021-2022

The distribution of Provincial Human Development Index numbers in the graph above can indicate that most provinces have Human Development Index values that are around the National Human Development Index and allow some provinces to grow beyond the National HDI in the next few years. In 2022, there are ten provinces with HDI values exceeding the National HDI which is recorded at 72.91. (BPS, 2022).

When compared to the per capita income that has been used, this index is more practical and sensitive. In addition, it serves as a useful tool for diligent researchers to continue their work and write reports on human growth. The HDI calculates a country's average achievement based on three fundamental dimensions: human growth, longevity, and health, indicated by life expectancy from birth. The writing and reading ability of the people is considered an indicator of adult knowledge (two-thirds by weight) and the primary school mix, the midpoint, is higher than one-third by weight of the gross enrollment ratio. One good way to know whether a standard of living is reasonable is gross GDP per capita. Purchasing power parity of gross domestic product and domestic product in US dollars (Hutagaol et al., 2024).

Based on this phenomenon, researchers are interested in conducting research on the effect of fiscal decentralization, per capita GDP, government spending and corruption on the human development index. This research is a development of Ratmono et al.'s research (2024) entitled "The Problem of Corruption In Government Organization: Empirical Evidence From Indonesia", while the difference with previous research is that this study examines how the influence of Fiscal Decentralization, GDP per capita, Government Expenditure, and Corruption on the Human Development Index is carried out in all provincial governments in Indonesia in 2021-2022.

2. Literature Review

2.1 Agency Theory

According to Jansen and Mecling (1976) agency problems can arise because each individual is assumed to have a preference to utilize personal utility which can be contrary to the interests of other individuals. Agency theory defines an agency relationship as a contract in which one or more people (principal) are involved with other people as agents to perform services involved in some authority in making decisions by the agent. The relationship between the central government and local governments in distributing balancing funds and the relationship between the community proxied by the DPRD (principal) and local governments (agent). Agency theory is a theory that explains the relationship between the principal as the first party and the agent as the other party who is bound by an agreement. The principal is in charge of making the contract, supervising and giving orders for the contract.

2.2 Human Development Index

The Human Development Index (HDI) is used to measure the level of human success. The Human Development Index consists of three basic dimensions namely: longevity and health, knowledge and a decent life. (BPS, 2022). If the HDI in a region is high, it can describe the people in the area as prosperous, the Human Development Index is measured based on length of life, knowledge, and decent living standards. Human Development Index data is obtained from the Central Bureau of Statistics (Ratmono et al., 2021).

2.3 Fiscal Decentralization

Fiscal decentralization is a policy that exists in Indonesia where the policy is related to decisions on the allocation, use, and management of public funds from the central government delegated to local governments. (Ratmono et al., 2021). Fiscal decentralization includes the authority of local governments to manage their own finances and financial resources, which include tax revenues and funds from the central government. (Hutagaol et al., 2024). Fiscal decentralization is a tool to achieve one of the country's goals, namely providing better public services and creating more democratic decision making. The relationship between the agent proxied by the local government and the principal proxied by the DPRD. As an agent, local governments should provide adequate services to the people funded by the region itself. However, local governments act opportunistically in making decisions so that they have an impact on the community (Pramartha & Dwirandra, 2018)

In line with previous research conducted (Pramartha & Dwirandra, 2018) stated that fiscal decentralization has a positive effect on the human development index. Thus, the hypothesis proposed is:

H1: Fiscal decentralization has a positive effect on the human development index

2.4 GDP per capita

GDP per capita is the average gross domestic product of a country that has been divided by the population of that country and illustrates the prosperity of a country. By keeping GDP per capita stable, greater inequality will have an impact on life expectancy. (Emara, 2020). Based on agency theory, GDP per capita is a benchmark or indicator that can reflect the level of prosperity of a country, while the human development index can measure the

level of human welfare based on health, income, and education. Agency theory emphasizes the importance of linkages between economic factors and social factors between agents and principals in achieving the welfare and prosperity of Indonesian society (Ezkirianto & Findi., 2013).

In line with previous research conducted (Dewa et al., 2021) stated that GDP per capita has a positive effect on the level of the Human Development Index. Thus, the proposed hypothesis is:

H2: GDP per capita has a positive effect on human development index.

2.5 Government Spending

Government expenditure is a fund that comes out of the government treasury that has been adjusted to the policies and objectives that have been set to finance government activities that have become the authority of the government. Without the active role of the government, no country can achieve good economic growth. Government spending on education and health can improve human resources in addition to government spending on infrastructure also causes positive externalities. (KIZILKAYA et al., 2015). Government spending is seen based on APBN / APBD spending on the education sector which is measured using rupiah units and the allocation of government spending on health can be seen from all spending in the APBN / APBD which is measured using rupiah units (Gupta et al., 2015). (Gupta et al., 2000). Based on agency theory, the community proxied as DPRD acts as a principal to further delegate its duties to local government agents as agents who are authorized to maximize public resources to achieve development goals. The relationship between government spending and the human development index through agency theory is government spending in various fields such as education, health and infrastructure which are expected to advance the human development index.

In line with previous research conducted (Emara, 2020) shows the result that government spending has a positive influence on the Human Development Index. Thus, the proposed hypothesis is:

H3: government spending has a positive effect on the human development index.

2.6 Corruption

Corruption is considered a major challenge in achieving economic and human development, which is supported by theoretical and empirical evidence. (Palash, 2018). In general, corruption can be defined as the abuse of authority for personal gain (World Bank, 1997). (*World Bank*, 1997). When officials accept or solicit bribes and when private entities give bribes it is to circumvent policies or procedures in order to gain more profit and become more competitive (Emara, 2020). (Emara, 2020).

In line with previous research conducted ((Ratmono et al., 2021); (Emara, 2020) (Bechererair & Tahtane, 2017); (Urbina & Rodriguez, 2022)). Which states that corruption has a negative effect on the human development index. Thus, the proposed hypothesis is:

H4: Corruption negatively affects the human development index

3. Research Methods

This research uses a type of quantitative research. According to (Sugiyono, 2019) Quantitative research is a form of scientific research that examines a problem from one phenomenon and sees the relationship between variables in the problems that have been determined. Quantitative research is research whose analysis uses statistical data measured using research variables described numerically (numbers). using panel data. With

secondary data sources the sample of this study consisted of 48 provincial governments throughout Indonesia for the 2021-2022 period, the method used was purposive sampling. Statistical testing using EVIEWS 12.

4. Results and Discussion

4.1 Model Selection Test

4.1.1 Chow Test

Table 2. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	73.411109	(23,20)	0.0000
Cross-section Chi-square	213.485412	23	0.0000

Prob value. Sebesar 0.0000 (<0.05) then the selected model is Fixed Effect (FEM)

4.1.2 Hausman Test

Table 3. Hausman Test Results

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. D.f.	Prob.
Cross-section random	5.453741	4	0.2438

Prob value. Sebesar 0.2438 (>0.05) then the selected model is Random Effect (REM)

4.1.3 LM test

Table 4. LM Test Results

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	17.96961 (0.0000)	1.013668 (0.3140)	18.98327 (0.0000)
Honda	4.239057 (0.0000)	-1.006811 (0.8430)	2.285544 (0.0111)
King-Wu	4.239057 (0.0000)	-1.006811 (0.8430)	-0.120318 (0.5479)
Standardized Honda	4.516044 (0.0000)	-0.712207 (0.7618)	-1.688935 (0.9544)
Standardized King-Wu	4.516044 (0.0000)	-0.712207 (0.7618)	-2.196446 (0.9860)
Gourieroux, et al.	--	--	17.96961 (0.0000)

Prob value. Breusch Pagan value of 0.0000 (<0.05) then the selected model is Random Effect (REM)
Based on the results of the chow test, Hausman Test and LM Test, the selected model is REM

4.2 Panel Data Regression Analysis

Table 4. Panel Data Regression

Panel Data Regression Analysis Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects) Date: 06/23/24 Time: 23:20
Sample: 2021 2022
Periods included: 2
Cross-sections included: 24
Total panel (balanced) observations: 48
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	71.03625	0.778376	91.26210	0.0000
X1	-0.974258	1.108966	-0.878528	0.3845
X2	0.037785	0.020601	1.834140	0.0736
X3	3.398722	2.768837	1.227491	0.2263
X4	0.006608	0.052452	0.125985	0.9003
	Effects Specification			
			S.D.	Rho
Cross-section random			3.222551	0.9756
Idiosyncratic random			0.509160	0.0244
	Weighted Statistics			
Root MSE	0.489991	R-squared		0.110202
Mean dependent var	7.976172	Adjusted R-squared		0.027430
S.D. dependent var	0.524945	S.E. of regression		0.517695
Sum squared resid	11.52436	F-statistic		1.331389
Durbin-Watson stat	1.745181	Prob(F-statistic)		0.273725
	Unweighted Statistics			
R-squared	0.057142	Mean dependent var		71.83708
Sum squared resid	515.2027	Durbin-Watson stat		0.039037

4.3 T test

Table 5. T-test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	71.03625	0.778376	91.26210	0.0000
X1	-0.974258	1.108966	-0.878528	0.3845
X2	0.037785	0.020601	1.834140	0.0736
X3	3.398722	2.768837	1.227491	0.2263
X4	0.006608	0.052452	0.125985	0.9003

Analysis of T Test Results (Hypothesis Test)

- The X1 variable has a t-statistic of -0.878528 with a *prob. (Signification)* value of 0.3845 (>0.05), it can be concluded that the X1 variable has no effect on the Y variable.
- The X2 variable has a t-statistic value of 1.834140 with a *prob. (significance)* value of 0.0736 (>0.05), it can be concluded that the X2 variable has no effect on the Y variable.
- The X3 variable has a t-statistic of 1.227491 with a *prob. (Significance)* value of 0.2263 (>0.05), it can be concluded that the X3 variable has no effect on the Y variable.
- Variable X4 has a t-statistic of 0.125985 with a *prob. (Significance)* value of 0.9003 (>0.05), it can be concluded that Variable X4 has a t-statistic of 0.9003 (>0.05) that Variable X4 has no effect on variable Y

4.4 Regression Equation Analysis

Y = 71.0362501831 - 0.974*X1 + 0.037*X2 + 3.398*X3 + 0.006*X4 + [CX=R]

- The constant value obtained is 71.0362501831, it means that if the independent variable increases by one unit on average by 71.03625011831
- The X1 Variable Regression Coefficient value is negative (-) of 0.974, it means that if the X1 variable decreases, it means that the X1 variable decreases, the y variable also decreases by 0.974, and vice versa.
- The X2 Variable Regression Coefficient value is positive (+) of 0.0377, it means that if the X2 variable increases, it means that the X2 variable increases, the Y variable increases by 0.974, and vice versa.
- The X3 Variable Regression Coefficient value is positive (+) of 3.398, it means that if the X1 variable increases, it means that the X3 variable increases, the Y variable will also increase by 3.398, and vice versa.
- The regression coefficient value of variable X4 is positive (+) of 0.006, it means that if variable X4 increases, it means that variable X4 increases, variable Y will also increase by 0.006, and vice versa.

4.5 F test

Table 6. F Test Results

R-squared	0.110202
Adjusted R-squared	0.027430
S.E. of regression	0.517695
F-statistic	1.331389
Prob(F-statistic)	0.273725

It is known that the F-Statistic value is 1.331 with a Prob. (F-Statistic) value of 0.273 (>0.05), it is concluded that the Independent Variable (X) has no effect on the Dependent Variable Y.

4.6 Coefficient of Determination

Table 7. Coefficient of Determination

R-squared	0.110202
Adjusted R-squared	0.027430
S.E. of regression	0.517695
F-statistic	1.331389
Prob(F-statistic)	0.273725

It is known that the Adjusted R *Square* value is 0.110, it concludes that the contribution of the influence of the Independent variables simultaneously (together) is 11%. While the remaining 89% is influenced by this research variable.

4.7 Hypothesis Test

Table 8. Hypothesis Test Results

Hypothesis	Statement	T value	Sig.	Description
H1	Fiscal Decentralization does not Influence on human development index	-0,878	0,384	H0 accepted, H1 rejected
H2	GDP per capita has no effect Against Human Development Index	1,834	0,073	H0 accepted, H2 rejected
H3	Government spending does not Affects the human development index	1,227	0,226	H0 accepted, H3 is rejected
H4	Corruption has no effect on Human development index	0,125	0,900	H0 accepted, H4 is rejected

Based on the results of the data processing above, it shows that H1 is rejected, which variable X1 has a t-statistic of -0.878528 with a *prob. (Signification)* value of 0.3845 (>0.05), it is concluded that the Fiscal Decentralization variable has no effect on the Human Development Index variable. This research is in line with research conducted by Rusydi et al., (2022) that Fiscal Decentralization has no effect on the Human Development Index.

the results of this study are not in line with agency theory which assumes that the agent relationship In this study, agency theory can be seen in the relationship between the agent proxied by the local government and the principal proxied by the DPRD. As an agent, the local government should provide adequate services to the community that are funded by the local revenue itself. However, sometimes local governments act opportunistically in making decisions so that they can have an impact on society. This is also supported by research conducted by Alamsyah Hasan et al., (2018) that any funds sourced from the APBN / APBD can be utilized properly by the regions so that the greater the funds increase, the Human Development Index will increase.

Based on the results of data processing, it shows that H2 is rejected, which means that the GDP per capita variable has no effect on the Human Development Index. This can be seen from the GDP per capita variable has a t-statistic value of 1.834140 with a prob. (significance) value of 0.0736 (>0.05), so it can be concluded that the GDP per capita variable has no effect on the Human Development Index variable. This research is in line with research conducted by Sasana (2012) states that GDP per capita has no influence on the Human Development Index. This is due to the small income owned by the community. This condition results in a greater allocation of consumption of primary needs so that spending on education and health is very limited.

Based on the results of data processing, it shows that H3 is rejected, which means that the Government Expenditure variable has no effect on the Human Development Index. This can be seen from the Government Expenditure Variable has a t-statistic of 1.227491 with a prob. (Significance) value of 0.2263 (>0.05), it can be concluded that the Government Expenditure Variable has no effect on the Human Development Index variable, so H3 is rejected. The results of this study are in line with research conducted by Eadrudin and Khasanah, (2011) that government spending has no effect on the formation of the Human Development Index. This indicates that government spending is less able to increase the Human Development Index. Due to the budget spent by the government has not been realized properly. This is also supported by the research of Kahang et al,. (2016) states that the utilization of Government Expenditure has no effect on the Human Development Index. This is because the government budget for the education, health sector is still very small compared to other government expenditures or expenditures.

Based on the results of data processing, it shows that H4 is rejected, which means that the corruption variable has no effect on the Human Development Index. This can be seen from the corruption variable has a t-statistic of 0.125985 with a prob. (Significance) value of 0.9003 (>0.05), it can be concluded that Variable X4 has a t-statistic of 0.9003 (>0.05) that the corruption variable has no effect on the Human Development Index variable, so H4 is rejected. The results of this study are in line with research conducted by (Ratmono et al., 2021; Bechererair and Tahtane 2017; emara (2020); Urbina and Rodriguez, 2021) which shows that corruption has no effect on the Human Development Index. This is supported by Akcay's (2006) research which states that corruption can lead to low living standards, and low levels of human capital accumulation, which have an impact on low levels of human development.

5. Conclusion

The conclusion of this study is as follows that Fiscal Decentralization, GDP per capita, Government Expenditure, and Corruption have no effect on the Human Development Index.

The limitation in this study is that this study only uses 4 variables in its research. For further research, it is hoped that it can add variables that support the increase in the Human Development Index.

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