



DIJEFA:
Dinasti International Journal of
Economics, Finance & Accounting

E-ISSN: 2721-303X
P-ISSN: 2721-3021

<https://dinastipub.org/DIJEFA> ✉ dinasti.info@gmail.com ☎ +62 811 7404 455

DOI: <https://doi.org/10.38035/dijeфа.v6i3>
<https://creativecommons.org/licenses/by/4.0/>

The Influence of Regional Original Revenue and Balancing Funds on the Human Development Index of Regencies/Cities in Indonesia

Achmad Yugo Pidhegso^{1*}, Dini Hariyanti², Lydia Rosintan Simanjuntak³

¹ Program Studi Magister Ilmu Ekonomi, Fakultas Ekonomi Dan Bisnis, Universitas Trisakti, Jakarta, Indonesia, achmadyugo@gmail.com

² Program Studi Magister Ilmu Ekonomi, Fakultas Ekonomi Dan Bisnis, Universitas Trisakti, Jakarta, Indonesia, dinihariyanti@trisakti.ac.id

³ Program Studi Magister Ilmu Ekonomi, Fakultas Ekonomi Dan Bisnis, Universitas Trisakti, Jakarta, Indonesia, lydia.rosintan@trisakti.ac.id

*Corresponding Author: achmadyugo@gmail.com

Abstract: This study aims to examine and analyze the influence of Regional Original Revenue (PAD) and Balancing Funds namely the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH) on the Human Development Index (HDI) in Indonesia. The data in this study cover all regencies/cities in Indonesia from 2016 to 2022. The research method used is panel data regression. The results show that PAD, DAU, DAK, and DBH simultaneously affect the HDI. Partial test results indicate that PAD, DAK, and DBH have a significant positive influence on HDI, while DAU has a significant negative effect. Based on these findings, local governments are encouraged to evaluate the use of DAU in efforts to improve HDI nationwide, considering that the utilization of DAU is at the discretion of the respective local governments.

Keyword: Human Development Index, Balancing Funds, General Allocation Fund, Special Allocation Fund, Revenue Sharing Fund, Fiscal Decentralization

INTRODUCTION

The objective of the Republic of Indonesia, as stated in the Preamble to the 1945 Constitution, is to promote the welfare of the nation (Undang-Undang Dasar (UUD) Tahun 1945, 1945). One of the key indicators used to measure this welfare is the Human Development Index (HDI), published by the United Nations Development Programme (UNDP), which comprises three main dimensions: health, education, and standard of living. The UNDP emphasizes that human beings are a nation's most valuable asset; therefore, development efforts should focus on creating an environment that enables people to live healthy, educated, and prosperous lives.

According to data from the UNDP, the following table presents the HDI scores of Southeast Asian countries in 2022:

Table 1. Human Development Index of Southeast Asian Countries in 2022

Country	HDI	Global Ranking
Singapore	0.939	12
Brunei Darussalam	0.829	51
Malaysia	0.803	62
Thailand	0.800	66
Indonesia	0.705	114
Vietnam	0.703	115
Philippines	0.699	116
Laos	0.607	140
Timor Leste	0.607	140
Cambodia	0.593	146
Myanmar	0.585	149

Based on the 2022 Human Development Index data from the United Nations Development Programme (UNDP), Indonesia ranks 114th out of 191 countries with a score of 0.705. Compared to other Southeast Asian countries, Indonesia ranks fifth, behind Singapore, Brunei Darussalam, Malaysia, and Thailand. This data indicates that the level of human development and overall welfare in Indonesia remains relatively low compared to several neighboring countries in the region (United Nations Development Programme, 2019).

Statistics Indonesia (BPS) also measures the Human Development Index (HDI) using a methodology aligned with the UNDP approach since 2014, but with a different scale ranging from 1 to 100. Similar to the UNDP, the BPS version of the HDI includes three key dimensions: health, measured by Life Expectancy at Birth (LEB); education, reflected by Expected Years of Schooling (EYS); and a decent standard of living, measured by Expenditure per Capita (EPC) (Badan Pusat Statistik Indonesia, 2022). The following figure shows the development of Indonesia's HDI from 2014 to 2022.

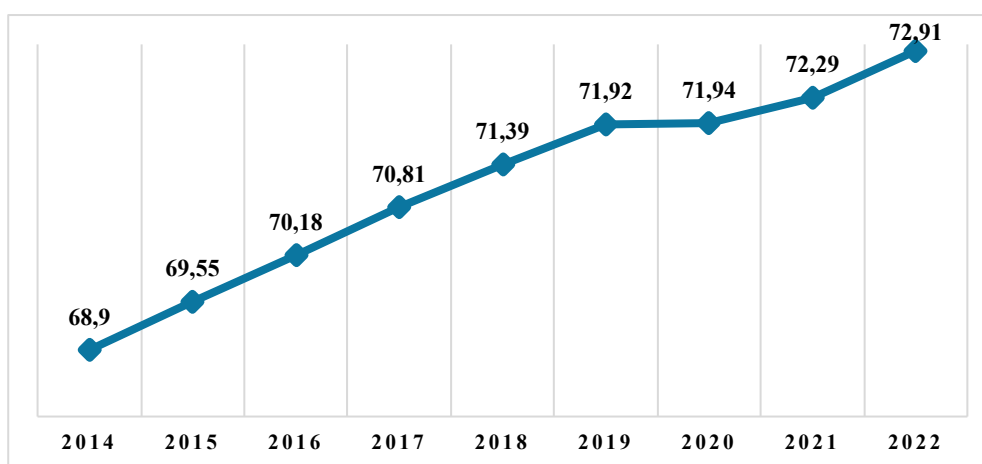


Figure 1. Indonesia's Human Development Index, 2014–2022

Figure 1 shows that Indonesia's HDI has consistently increased each year, with an average annual rise of 0.5 points. However, there was a noticeable slowdown in 2020, where the HDI only increased by 0.02 points compared to the previous year, as a result of the Covid-19 pandemic. Despite some recovery, the overall rate of improvement has not been sufficient

to meet the HDI targets set in the State Budget (APBN), in which HDI has been used as one of the indicators of quality development since 2016.

Table 2. HDI Target Achievement in the APBN, 2016–2022

Year	APBN Target	HDI Realization	Description
2016	70.1	70.18	Achieved
2017	70.1	70.81	Achieved
2018	71.5	71.39	Not Achieved
2019	71.98	71.92	Not Achieved
2020	72.51	71.94	Not Achieved
2021	72.78 – 72.95	72.29	Not Achieved
2022	73.41 – 73.46	72.91	Not Achieved

Table 2 indicates that the Human Development Index (HDI) targets set in the State Budget (APBN) were only achieved in 2016 and 2017. From 2018 to 2022, however, these targets were consistently not met. This situation indicates the need for strategic action by the government to identify regions with low HDI achievements or slow HDI growth, in order to implement more targeted and effective policy interventions that promote equitable human development across all regions.

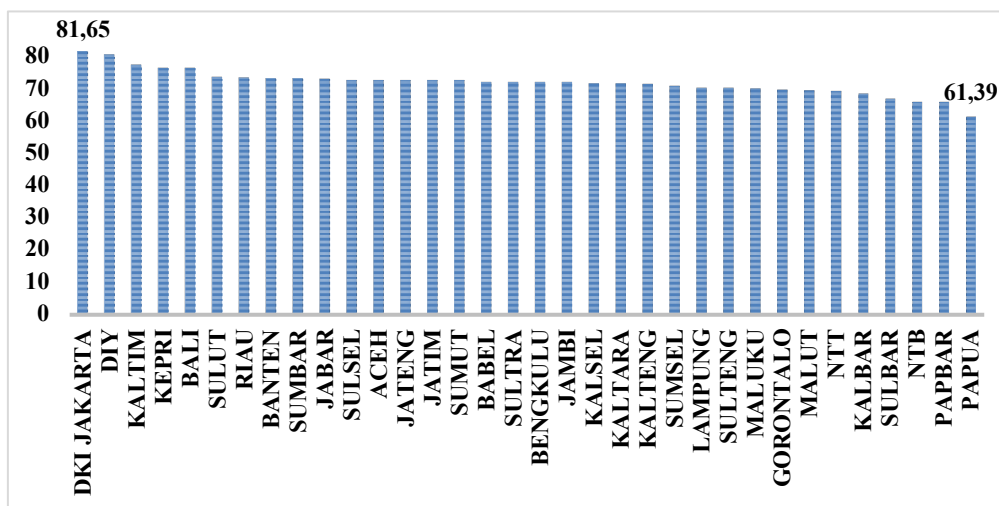


Figure 2. Provincial HDI in Indonesia, 2022

Figure 2 reveals a stark disparity among provinces in terms of Human Development Index (HDI) achievement. DKI Jakarta recorded the highest HDI at 81.65, while Papua had the lowest at 61.39. Out of a total of 34 provinces in Indonesia, only 10 had HDI scores above the national average of 72.91. This fact highlights that equitable human development across Indonesia remains a major challenge requiring serious attention from both central and regional governments.

Table 3. HDI in Regencies/Cities in Indonesia, 2022

Category	HDI	Description
Highest HDI	87.69	Yogyakarta City
Lowest HDI	34.1	Nduga Regency
HDI > National	157	
HDI < National	357	

Table 3 provides a summary of the HDI in Indonesian regencies and cities in 2022, showing that only 157 out of 514 (around 30.6%) had an HDI above the national average, while the remaining 357 (69.4%) were below. The disparity in HDI between regions is quite

significant, with a gap of 53.59 points between Yogyakarta City the area with the highest HDI (87.69) and Nduga Regency, which had the lowest (34.1). This gap underscores the persistent inequality in human development across regions in Indonesia, which calls for more equitable and just attention and action from the government.

The 2022 Human Development Index (HDI) data still reflects a “Java-centric” tendency, where the average HDI of provinces on the island of Java is higher than that of provinces outside Java. Only three provinces outside Java—East Kalimantan, Riau Islands, and Bali—have HDI scores above the average for Java. This condition illustrates horizontal disparities in development and welfare across regions. To address these inequalities, the government enacted Law Number 22 of 1999 on Regional Government and Law Number 25 of 1999 on the Financial Balance between the Central and Regional Governments as an initial step in implementing regional autonomy and fiscal decentralization. Through these policies, regional governments are granted the authority to independently manage and organize development in their respective areas, with the aim of promoting equitable development throughout Indonesia.

(Undang-Undang (UU) Nomor 25 Tahun 1999 Tentang Perimbangan Keuangan Antara Pemerintah Pusat Dan Daerah, 1999) introduced the concept of fiscal decentralization, which involves the transfer of budgetary resources from the central government to regional governments in order to enhance the efficiency and effectiveness of resource allocation. According to (Oates, 1999) fiscal decentralization enables local governments to manage resources more accurately because they have a better understanding of local needs. In the context of improving HDI, funding responsibilities for programs are shared between the central government through the State Budget (APBN) and regional governments through the Regional Budget (APBD). The structure of the APBD is similar to that of the APBN, encompassing revenue, expenditure, and regional financing. However, regional revenue includes unique sources such as Regional Original Revenue (PAD) as organic income, and Transfers to Regions and Village Funds (TKDD), which are transfers from the central government (Undang-Undang (UU) Nomor 33 Tahun 2004 Tentang Perimbangan Keuangan Antara Pemerintah Pusat Dan Pemerintahan Daerah, 2004). This mechanism highlights the strategic role of regional governments in supporting human development through autonomous budget management that aligns with the characteristics of each region.

(Undang-Undang (UU) Nomor 1 Tahun 2022 Tentang Hubungan Keuangan Antara Pemerintah Pusat Dan Pemerintah Daerah, 2022) that Regional Original Revenue (PAD) consists of four main components: Regional Taxes, Regional Levies, the Results of the Management of Separated Regional Assets, and Other Legitimate PAD. The amount of PAD a region can obtain largely depends on its economic potential and the regional government's ability to innovate and optimize local revenue sources. Therefore, strengthening PAD is key to supporting regional fiscal independence and ensuring more sustainable development financing.

TKDD (Transfers to Regions and Village Funds) includes various types of funds, such as Revenue Sharing Funds (DBH), General Allocation Funds (DAU), Physical Special Allocation Funds (DAK), Non-Physical DAK, Special Autonomy Funds (Otsus), Privilege Funds (Danais), Regional Incentive Funds (DID), and Village Funds (DD). These funds are provided by the central government to the regions and are recognized as Regional Revenue in the Regional Budget (APBD). Since the implementation of fiscal decentralization, TKDD has become an important instrument in the State Budget (APBN), accounting for up to one-third of the APBN (Setiawan, 2021). Over the past six years, the significant contribution of TKDD to the APBD reflects the high dependence of regional governments on central government budget assistance to implement various local programs.

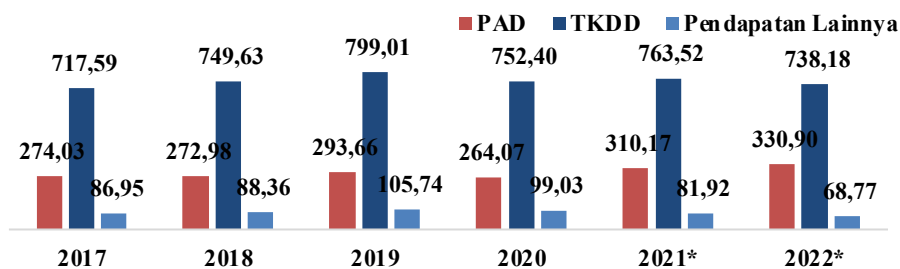


Figure 3. Realization of Regional Revenue in 2017–2022

Data indicates that TKDD (Transfers to Regions and Village Funds) serves as the primary source of revenue for local governments, contributing an average of 66.51% to Regional Revenue. The composition of TKDD illustrates the extent of regional dependence on central government funds to support various development programs and regional activities. The following presents the composition of TKDD from 2017 to 2022:

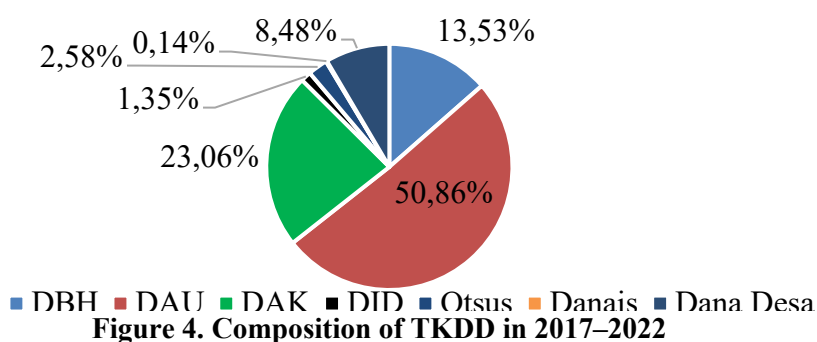


Figure 4. Composition of TKDD in 2017–2022

The data shows that the three largest components of TKDD are the General Allocation Fund (DAU) at 50.86%, followed by the Special Allocation Fund (DAK) at 23.96%, and the Revenue Sharing Fund (DBH) at 13.53%. These three are considered balancing funds aimed at helping regional governments finance their responsibilities, reducing funding disparities between the central and regional governments, and minimizing interregional fiscal gaps. Overall, the proportion of balancing funds within TKDD reaches 87.46%, while Village Funds contribute 8.48%. A study by (Ginting et al., 2019) indicates that regional governments are highly dependent on balancing funds to meet their needs, suggesting that the significant proportion of these funds in the APBD should have a substantial impact on regional economic development.

The study by (Suhyanto et al., 2020) examined the influence of Regional Original Revenue (PAD), General Allocation Funds (DAU), Revenue Sharing Funds (DBH), Special Allocation Funds (DAK), and Village Funds (DD) on the Human Development Index (HDI) in regencies/municipalities within West Java Province. The results showed that all variables (PAD, DAU, DBH, DAK, and DD) had a significant effect on HDI. Meanwhile, (Harahap, 2011) investigated the influence of DAU, DAK, and DBH on HDI in regencies/municipalities in North Sumatra Province and found that the three variables had a simultaneous significant effect on HDI, although they had no partial effect. This research was extended by (Sembiring, 2011) who examined the influence of PAD, DAU, and DAK on HDI in North Sumatra Province. The findings indicated that PAD had a significantly positive effect on HDI, DAU had a significantly negative effect, and DAK had no significant effect on HDI.

Based on the studies conducted by (Harahap, 2011; Sembiring, 2011; Suhyanto et al., 2020) further analysis is needed to investigate the effect of PAD as a region’s original organic income and Balancing Funds (DAU, DAK, DBH) as transferred income from the central government on HDI across all regencies/municipalities in Indonesia during the 2016–2022

period. In this analysis, HDI must be categorized into groups: Very High, High, Medium, and Low HDI. This study aims to examine and analyze the influence of Regional Original Revenue (PAD) and Balancing Funds, namely General Allocation Funds (DAU), Special Allocation Funds (DAK), and Revenue Sharing Funds (DBH), on the Human Development Index (HDI) in Indonesia.

METHOD

This study uses a quantitative method with a deductive-inductive approach, focusing on testing theories and relationships between variables through empirical data. The aim of quantitative research is to test theories, build facts, and provide statistical descriptions and predictions of outcomes. This research design is structured and formal, carefully planned before the testing phase. The study aims to examine the influence of independent variables (X), namely Regional Original Revenue and Balancing Funds (DAU, DAK, and DBH), on the dependent variable (Y), which is the Human Development Index (HDI). The study involves 514 regencies/municipalities in Indonesia, with secondary data collection from 2016 to 2022. Subsequently, testing is conducted based on the predetermined hypotheses to determine the extent of the influence of these variables on HDI.

The data type used in this research is secondary data. Secondary data is data that is indirectly collected or not directly gathered by the researcher, which can also include documents. Below is a table showing the data sources for each variable in this research:

Table 4. Research Data Sources

No	Data Name	Data Source
1	Human Development Index 2016 - 2022	Central Bureau of Statistics
2	Realization of Regional Original Revenue 2016 - 2022	Directorate General of Financial Balance, Ministry of Finance
3	Realization of General Allocation Fund (DAU) 2016 - 2022	Directorate General of Financial Balance, Ministry of Finance
4	Realization of Special Allocation Fund (DAK) 2016 - 2022	Directorate General of Financial Balance, Ministry of Finance
5	Realization of Revenue Sharing Fund (DBH) 2016 - 2022	Directorate General of Financial Balance, Ministry of Finance

This study will use panel data regression analysis, which will be conducted using Eviews 12. Panel data is a combination of Cross Section and Time Series data. The Cross Section data in this study includes all variables from 500 regencies/municipalities in Indonesia, while the Time Series data includes data for all variables from the period 2016 to 2022 with an annual frequency.

In this study, the researcher will perform clustering on the dependent variable, HDI. Clustering is done based on the HDI categories provided by (Badan Pusat Statistik Indonesia, 2022) which includes four categories: Very High, High, Medium, and Low, as detailed below:

Table 5. HDI Categories

No	HDI Category	Range
1	Very High	$HDI \geq 80$
2	High	$70 \leq HDI < 80$
3	Medium	$60 \leq HDI < 70$
4	Low	$HDI < 60$

This study will test and analyze the relationship between the independent and dependent variables across all regencies/municipalities and within each HDI cluster based on the HDI of regencies/municipalities in 2022. The model used in this study is as follows:

$$IPM_{it} = \beta_0 + \beta_1 PAD_{it} + \beta_2 DAU_{it} + \beta_3 DAK_{it} + \beta_4 DBH_{it} + \varepsilon_{it}$$

Where:

HDI = Human Development Index

PAD = Regional Original Revenue

DAU = General Allocation Fund

DAK = Special Allocation Fund

DBH = Revenue Sharing Fund

Panel data regression modeling can be conducted using three alternative approaches: Ordinary Least Square (OLS)/Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM), as explained by (Widarjono, 2007). Essentially, the selection of the panel data estimation model depends on the research conditions, particularly the number of individuals and the variables used. The three tests used to choose the appropriate estimation technique, according to (Widarjono, 2007), are the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test. The Chow Test is used to select between the CEM and FEM models by comparing the F-statistic value with the F-table value. The Hausman Test is used to select between the FEM and REM models based on the differences in the estimates between the two models. If the Hausman statistic is greater than the critical Chi-Square value, the appropriate model is FEM, while if it is smaller, the appropriate model is REM. The LM Test is used to select between CEM and REM, relying on the residual value from the CEM. If the LM calculated value is greater than the critical Chi-Square value, the appropriate model is REM. In addition, the selection between FEM and REM is also influenced by the number of time periods (t) and the number of individuals (i), where FEM is recommended if the number of time periods is larger, while REM is more suitable when the number of individuals is larger.

The classical assumption test is an important step in regression analysis to ensure that the data used meet several basic requirements. This test includes autocorrelation test, multicollinearity test, heteroscedasticity test, and normality test of data distribution. According to (Gujarati et al., 2009) panel data has the advantage of providing more complete information, increasing variability, reducing collinearity, and improving degrees of freedom, making the analysis more efficient. With these advantages, panel data testing does not require the classical assumption tests that are typically applied to cross-sectional data.

In addition, to test hypotheses in the research, two types of tests are used: the t-test and the F-test. The t-test is used to examine whether each coefficient parameter statistically meets the desired criteria by comparing the t-statistic value with the t-table value at a significance level of 5%. The decision-making process can be done by comparing the t-statistic with the t-table: if the t-statistic is smaller than the t-table or the probability is greater than 0.05, then the null hypothesis (Ho) is accepted; if the t-statistic is larger than the t-table or the probability is smaller than 0.05, then the alternative hypothesis (Ha) is accepted.

Meanwhile, the F-statistic test is used to examine the significance of the influence of independent variables on the dependent variable, as well as to ensure that the regression model used is appropriate to proceed. According to (Ghozali, 2018) with a significance level of 0.05, if the F-statistic is smaller than the F-table or the probability is greater than 0.05, then the independent variables do not have a significant effect on the dependent variable; conversely, if the F-statistic is larger than the F-table or the probability is smaller than 0.05, then the independent variables have a significant effect on the dependent variable.

RESULTS AND DISCUSSION

Panel Effect Test

There are 3 (three) models in panel data regression, namely common effect, fixed effect, and random effect. The selection of the best model is based on the results of the Chow test,

Hausman test, and LM test. The main objective of the panel effect test is to select the model from the three available models. The first step is to select the best model between the common effect model and the fixed effect model using the Chow test. Then, select the best model between the fixed effect model and the random effect model using the Hausman test. If necessary, the Lagrange Multiplier (LM) test can be used to choose the best model between the random effect model and the common effect model. Below are the results of the panel effect test:

Table 6. Panel Effect Test

IPM Category	Test	Statistic	Probability	Selected Model	Conclusion
All Districts/Cities	Chow Test	Cross-section Chi-square	0.0000	FEM	FEM Selected
	Hausman Test	Cross-section random	0.0000	FEM	
Very High	Chow Test	Cross-section Chi-square	0.0000	FEM	FEM Selected
	Hausman Test	Cross-section random	0.0005	FEM	
High	Chow Test	Cross-section Chi-square	0.0000	FEM	FEM Selected
	Hausman Test	Cross-section random	0.0000	FEM	
Medium	Chow Test	Cross-section Chi-square	0.0000	FEM	FEM Selected
	Hausman Test	Cross-section random	0.0000	FEM	
Low	Chow Test	Cross-section Chi-square	0.0000	FEM	CEM Selected
	Hausman Test	Cross-section random	0.1442	REM	
	LM Test	Breusch-Pagan	0.0000	CEM	

Table 6 shows that for all districts/cities in Indonesia, the probability value for the cross-section chi-square test is 0.0000, so the fixed effect model is selected. Next, the cross-section random value is 0.0000, so the fixed effect model is chosen. This means that for all districts/cities, the selected and best model is the fixed effect model. For districts/cities in the Very High IPM category, the probability value for the cross-section chi-square test is 0.0000, so the fixed effect model is selected. Next, the cross-section random value is 0.0005, so the fixed effect model is selected. This means that for districts/cities in the Very High IPM category, the selected and best model is the fixed effect model. For districts/cities in the High IPM category, the probability value for the cross-section chi-square test is 0.0000, so the fixed effect model is selected. Next, the cross-section random value is 0.0000, so the fixed effect model is selected. This means that for districts/cities in the High IPM category, the selected and best model is the fixed effect model. For districts/cities in the Medium IPM category, the probability value for the cross-section chi-square test is 0.0000, so the fixed effect model is selected. Next, the cross-section random value is 0.0000, so the fixed effect model is selected. This means that for districts/cities in the Medium IPM category, the selected and best model is the fixed effect model. For districts/cities in the Low IPM category, the probability value for the cross-section chi-square test is 0.0000, so the fixed effect model is selected. Next, the cross-section random value is 0.1442, so the random effect model is selected. Then, the Breusch-Pagan value is 0.0000, so the common effect model is selected. This means that for

districts/cities in the Low IPM category, the selected and best model is the common effect model.

Hypothesis Testing

After the panel effect test is conducted, the research continues with hypothesis testing. In hypothesis testing, the researcher interprets the regression coefficients and the regression model. At this stage, the researcher examines the influence of independent variables on the dependent variable. In the previous section, the best model selection was conducted, which is the Fixed Effect Model (FEM) for the entire district/city IPM, Very High IPM category, High IPM category, and Medium IPM category. The best model for the Low IPM category is the Common Effect Model (CEM). Below are the results of hypothesis testing for each IPM category:

Table 7. Fixed Effect Model Test for All Districts/Cities

Variable	Coefficient	Probability	Conclusion
C	76.48591	0.0000	
PAD	0.001413	0.0000	Significant
DAU	-0.012487	0.0000	Significant
DAK	0.002746	0.0000	Significant
DBH	0.001109	0.0000	Significant
R-squared	0.982948		
Adjusted R-squared	0.980085		
Prob(F-statistic)	0.000000		

Based on the FEM model above, the obtained regression model is:

$$IPM_{it} = 76.48591 + 0.001413 PAD_{it} - 0.012487 DAU_{it} + 0.002746 DAK_{it} + 0.001109 DBH_{it} + \varepsilon_{it}$$

Table 8. Fixed Effect Model Test for Districts/Cities with Very High IPM Category

Variable	Coefficient	Probability	Conclusion
C	84.98562	0.0000	
PAD	0.000593	0.0027	Significant
DAU	-0.006821	0.0000	Significant
DAK	0.003377	0.0003	Significant
DBH	0.001331	0.0043	Significant
R-squared	0.864721		
Adjusted R-squared	0.839834		
Prob(F-statistic)	0.000000		

Based on the FEM model above, the obtained regression model is:

$$IPM_{it} = 84.98562 + 0.000593 PAD_{it} - 0.006821 DAU_{it} + 0.003377 DAK_{it} + 0.001109 DBH_{it} + \varepsilon_{it}$$

Table 9. Fixed Effect Model Test for Districts/Cities with High IPM Category

Variable	Coefficient	Probability	Conclusion
C	78.00243	0.0000	
PAD	0.002684	0.0000	Significant
DAU	-0.010124	0.0000	Significant
DAK	0.001695	0.0004	Significant
DBH	0.000777	0.0000	Significant
R-squared	0.936163		
Adjusted R-squared	0.925352		

Prob(F-statistic)	0.000000
-------------------	----------

Based on the FEM model above, the obtained regression model is:

$$IPM_{it} = 78.00243 + 0.002684 PAD_{it} - 0.010124 DAU_{it} + 0.001695 DAK_{it} + 0.000777 DBH_{it} + \epsilon_{it}$$

Table 10. Fixed Effect Model Test for Districts/Cities with Medium IPM Category

Variable	Coefficient	Probability	Conclusion
C	65.40095	0.0000	
PAD	0.005767	0.0000	Significant
DAU	-0.001406	0.0041	Significant
DAK	0.001280	0.1918	Not Significant
DBH	0.001616	0.0000	Significant
R-squared	0.094310		
Adjusted R-squared	0.091939		
Prob(F-statistic)	0.000000		

Based on the FEM model above, the obtained regression model is:

$$IPM_{it} = 65.40095 + 0.005767 PAD_{it} - 0.001406 DAU_{it} + 0.001280 DAK_{it} + 0.001616 DBH_{it} + \epsilon_{it}$$

Table 11. Common Effect Model Test for Districts/Cities with Low IPM Category

Variable	Coefficient	Probability	Conclusion
C	57.33094	0.0000	
PAD	0.130961	0.0000	Significant
DAU	-0.016025	0.0001	Significant
DAK	-0.002545	0.7990	Not Significant
DBH	0.014030	0.4685	Not Significant
R-squared	0.202370		
Adjusted R-squared	0.174383		
Prob(F-statistic)	0.000032		

Based on the CEM model above, the obtained regression model is:

$$IPM_{it} = 57.33094 + 0.130961 PAD_{it} - 0.016025 DAU_{it} - 0.002545 DAK_{it} + 0.014030 DBH_{it} + \epsilon_{it}$$

Coefficient of Determination (Adjusted R-Square)

Below is the summary of the coefficient of determination from the model testing using data for all IPM categories across districts/cities, including Very High, High, Medium, and Low IPM categories:

Table 12. Coefficient of Determination

IPM Category	Coefficient of Determination
All Districts/Cities	0.980085
Very High	0.839834
High	0.925352
Medium	0.091939
Low	0.174383

Table 12 shows that the Adjusted R-Square (R2) value for the IPM data across all districts/cities is 0.980085, meaning that the independent variables explain 98% of the dependent variable. This implies that the independent variables, namely PAD, DAU, DAK, and DBH, are capable of explaining 98% of the behavior of IPM, and the other variables in the study only explain 2% of IPM behavior in Indonesia. In districts/cities with a Very High IPM category, the R2 value is 0.839834, meaning the independent variables explain 84.98% of the dependent variable. This suggests that the independent variables, namely PAD, DAU, DAK, and DBH, explain 84.98% of the IPM behavior, and other variables in the study explain only 15.02% of IPM behavior in districts/cities with a Very High IPM category. In districts/cities with a High IPM category, the R2 value is 0.925352, meaning the independent variables explain 92.53% of the dependent variable. This indicates that the independent variables, namely PAD, DAU, DAK, and DBH, explain 92.53% of the IPM behavior, and other variables in the study explain only 7.47% of IPM behavior in districts/cities with a High IPM category. In districts/cities with a Medium IPM category, the R2 value is 0.091939, meaning the independent variables explain only 9.19% of the dependent variable. This implies that the independent variables, namely PAD, DAU, DAK, and DBH, explain only 9.19% of the IPM behavior, and other variables in the study explain 90.81% of IPM behavior in districts/cities with a Medium IPM category. In districts/cities with a Low IPM category, the R2 value is 0.174383, meaning the independent variables explain only 17.43% of the dependent variable. This suggests that the independent variables, namely PAD, DAU, DAK, and DBH, explain only 17.43% of the IPM behavior, and other variables in the study explain 82.57% of IPM behavior in districts/cities with a Low IPM category.

Simultaneous Test (F-Test)

The results of the F-test can be seen from the Prob (F-Statistic) values as follows:

Table 13. Simultaneous Test (F-Test)

IPM Category	Prob (F-Statistic)
All Districts/Cities	0.000000
Very High	0.000000
High	0.000000
Medium	0.000000
Low	0.000032

These results indicate that the research model is suitable for use, meaning that at least one independent variable has a significant effect on the dependent variable. This suggests that, collectively, the independent variables PAD, DAU, DAK, and DBH significantly and linearly affect the dependent variable, which is the IPM.

Partial Test (t-Test)

Hypothesis 1: Regional Original Income (PAD) has a positive effect on the Human Development Index (IPM)

Based on the results of the test, the coefficient for the PAD variable is 0.001413. This means that if PAD increases by IDR 1 billion, the IPM will increase by 0.001413 on average. The significance value is 0.0000, which indicates that, at a 99% confidence level, there is a positive effect of PAD on IPM across all districts/cities in Indonesia. Therefore, it can be concluded that H1 is accepted. For districts/cities with a "Very High" IPM category, the coefficient for PAD is 0.000593. This means that if PAD increases by IDR 1 billion, the IPM will increase by 0.000593 on average. The significance value is 0.0027, which indicates a positive effect of PAD on the IPM in districts/cities with a "Very High" IPM category. In

districts/cities with a "High" IPM category, the coefficient for PAD is 0.002684. This means that if PAD increases by IDR 1 billion, the IPM will increase by 0.002684 on average. The significance value is 0.0000, which indicates that, at a 99% confidence level, there is a positive effect of PAD on the IPM in districts/cities with a "High" IPM category. For districts/cities with a "Medium" IPM category, the coefficient for PAD is 0.005767. This means that if PAD increases by IDR 1 billion, the IPM will increase by 0.005767 on average. The significance value is 0.0000, indicating a positive effect of PAD on the IPM in districts/cities with a "Medium" IPM category. In districts/cities with a "Low" IPM category, the coefficient for PAD is 0.130961. This means that if PAD increases by IDR 1 billion, the IPM will increase by 0.130961 on average. The significance value is 0.0000, which indicates a positive effect of PAD on the IPM in districts/cities with a "Low" IPM category.

Hypothesis 2: General Allocation Fund (DAU) has a negative effect on the Human Development Index (IPM)

Based on the results of the test, the coefficient for the DAU variable is -0.012487. This means that if DAU increases by IDR 1 billion, the IPM will decrease by 0.012487 on average. The significance value is 0.0000, which indicates that, at a 99% confidence level, there is a negative effect of DAU on IPM across all districts/cities in Indonesia. Therefore, it can be concluded that H2 is rejected. For districts/cities with a "Very High" IPM category, the coefficient for DAU is -0.006821. This means that if DAU increases by IDR 1 billion, the IPM will decrease by 0.006821 on average. The significance value is 0.0000, which indicates a negative effect of DAU on the IPM in districts/cities with a "Very High" IPM category. In districts/cities with a "High" IPM category, the coefficient for DAU is -0.010124. This means that if DAU increases by IDR 1 billion, the IPM will decrease by 0.010124 on average. The significance value is 0.0000, which indicates that, at a 99% confidence level, there is a negative effect of DAU on the IPM in districts/cities with a "High" IPM category. For districts/cities with a "Medium" IPM category, the coefficient for DAU is -0.001406. This means that if DAU increases by IDR 1 billion, the IPM will decrease by 0.001406 on average. The significance value is 0.0041, which indicates a negative effect of DAU on the IPM in districts/cities with a "Medium" IPM category. In districts/cities with a "Low" IPM category, the coefficient for DAU is -0.016025. This means that if DAU increases by IDR 1 billion, the IPM will decrease by 0.016025 on average. The significance value is 0.0001, which indicates that, at a 99% confidence level, there is a negative effect of DAU on the IPM in districts/cities with a "Low" IPM category.

Hypothesis 3: Special Allocation Fund (DAK) has a positive effect on the Human Development Index (IPM)

Based on the results of the test, the coefficient for the DAK variable is 0.002746. This means that if DAK increases by IDR 1 billion, the IPM will increase by 0.002746 on average. The significance value is 0.0000, which indicates that, at a 99% confidence level, there is a positive effect of DAK on IPM across all districts/cities in Indonesia. Therefore, it can be concluded that H3 is accepted. For districts/cities with a "Very High" IPM category, the coefficient for DAK is 0.003377. This means that if DAK increases by IDR 1 billion, the IPM will increase by 0.003377 on average. The significance value is 0.0003, which indicates a positive effect of DAK on the IPM in districts/cities with a "Very High" IPM category. In districts/cities with a "High" IPM category, the coefficient for DAK is 0.001695. This means that if DAK increases by IDR 1 billion, the IPM will increase by 0.001695 on average. The significance value is 0.0004, which indicates that, at a 99% confidence level, there is a positive effect of DAK on the IPM in districts/cities with a "High" IPM category. For districts/cities with a "Medium" IPM category, the coefficient for DAK is 0.001280. However, the

significance value is 0.1918, which indicates that DAK does not have a significant effect on IPM in districts/cities with a "Medium" IPM category. In districts/cities with a "Low" IPM category, the coefficient for DAK is -0.002545. However, the significance value is 0.7990, which indicates that DAK does not have a significant effect on IPM in districts/cities with a "Low" IPM category.

Hypothesis 4: Revenue Sharing Fund (DBH) has a positive effect on the Human Development Index (IPM)

Based on the results of the test, the coefficient for the DBH variable is 0.001109. This means that if DBH increases by IDR 1 billion, the IPM will increase by 0.001109 on average. The significance value is 0.0000, indicating that, at a 99% confidence level, there is a positive effect of DBH on IPM in all districts/cities across Indonesia. Therefore, it can be concluded that H4 is accepted. For districts/cities with a "Very High" IPM category, the coefficient for DBH is 0.003377. This means that if DBH increases by IDR 1 billion, the IPM will increase by 0.003377 on average. The significance value is 0.0003, which indicates a positive effect of DBH on IPM in districts/cities with a "Very High" IPM category. In districts/cities with a "High" IPM category, the coefficient for DBH is 0.000777. This means that if DBH increases by IDR 1 billion, the IPM will increase by 0.000777 on average. The significance value is 0.0000, indicating that there is a positive effect of DBH on IPM in districts/cities with a "High" IPM category. For districts/cities with a "Medium" IPM category, the coefficient for DBH is 0.001616. This means that if DBH increases by IDR 1 billion, the IPM will increase by 0.001616 on average. The significance value is 0.0000, indicating that there is a positive effect of DBH on IPM in districts/cities with a "Medium" IPM category. In districts/cities with a "Low" IPM category, the coefficient for DBH is 0.014030. However, the significance value is 0.4685, which indicates that DBH does not have a significant effect on IPM in districts/cities with a "Low" IPM category.

Discussion

Positive Effect of Local Revenue (PAD) on Human Development Index (IPM)

Based on the test results, Local Revenue (PAD) has a significant positive effect on the Human Development Index (IPM). This finding is consistent with previous studies conducted by (De Fretes, 2017; Maulidi et al., 2023; Melgiana et al., 2020). Compared to other independent variables such as the General Allocation Fund (DAU), Specific Allocation Fund (DAK), and Revenue Sharing Fund (DBH), PAD has distinct characteristics as it is an organic source of income generated within the region. The majority of PAD comes from local taxes and regional levies (PDRD), which stem from activities carried out by the local community. Therefore, the local population, through the payment of taxes and regional levies, plays a significant role in efforts to improve the quality of human development in the region, as reflected in the IPM. In the effort to improve IPM in the region, both the central government and local governments need to have programs to enhance taxpayer compliance and actively pursue efforts to expand local tax revenue by improving data collection on taxable objects and subjects that meet the criteria but have not yet been registered in the local tax database

Negative Effect of General Allocation Fund (DAU) on Human Development Index (IPM)

The test results show that the General Allocation Fund (DAU) has a significant negative effect on the Human Development Index (IPM). This finding contradicts some previous studies conducted by (Sembiring, 2011) in Semarang City and (Riviando et al., 2019) in the districts and cities of West Sumatra Province. However, this result aligns with research by (Sulastri & Efendri, 2021) in the districts and cities across the provinces of Kalimantan Island and (Sembiring, 2011) in North Sumatra Province. This discrepancy is due to differences in the

research samples used in each study. Since the allocation of DAU is a discretionary decision of each local government, conditions in each region will differ. The significant negative effect of DAU on IPM may be caused by the higher use of DAU for employee expenses rather than for technical program spending. This issue is also explained by (Sembiring, 2011; Sulastri & Efendri, 2021). Given that DAU is the largest component of transfer income and represents the largest portion of regional income, it is unfortunate that such a large amount of funds is not allocated for technical programs that can have a significant impact on improving the quality of life for local communities.

Positive Effect of Special Allocation Fund (DAK) on Human Development Index (IPM)

The test results show that the Special Allocation Fund (DAK) has a significant positive effect on the Human Development Index (IPM) in all districts/cities across Indonesia, districts/cities with a Very High IPM category, and districts/cities with a High IPM category. However, for districts/cities with Medium and Low IPM categories, the test results show that DAK does not have a significant effect on IPM. The condition where DAK has a significant positive effect on IPM is in line with previous studies by (De Fretes, 2017; Maulidi et al., 2023; Melgiana et al., 2020; Nashshar & Mulyana, 2022). DAK is characterized as a "bottom-up" approach, where local governments propose programs based on urgency and development plans. Thus, it can be said that the ability of local governments to plan DAK programs to improve community quality is heading in the right direction. In all districts/cities in Indonesia, the coefficient value of DAK is the largest in increasing IPM compared to PAD and DBH, which is 0.002746. Therefore, both central and local governments need to have a larger DAK allocation to enhance IPM nationally.

The condition where DAK does not have a significant effect on the IPM of districts/cities with Medium and Low IPM categories aligns with research by (Irianto et al., 2021) which was conducted in districts/cities in West Nusa Tenggara Province, where 80% of districts/cities had Medium IPM categories. Given the bottom-up nature of DAK, where program proposals originate from the regions, the ability of local governments to identify needs and effectively plan development is critical. There may be a bias in the DAK variable, as there are several types of DAK designated for specific sectors, and in this research model, they were not separated. Meanwhile, in the dependent variable, which is IPM, it is only divided into three dimensions: education, health, and expenditure.

Positive Effect of Revenue Sharing Fund (DBH) on Human Development Index (IPM)

The test results show that the Revenue Sharing Fund (DBH) has a significant positive effect on the Human Development Index (IPM) in all districts/cities across Indonesia, districts/cities with a Very High IPM category, districts/cities with a High IPM category, and districts/cities with a Medium IPM category. However, for districts/cities with a Low IPM category, the test results show that DBH does not have a significant effect on IPM. The condition where DBH has a significant positive effect aligns with previous studies by (Patadang et al., 2021) but does not align with research conducted by (De Fretes, 2017; Sulastri & Efendri, 2021). Meanwhile, the condition where DBH does not have a significant effect on IPM is in line with research by (Asari & Suardana, 2018; Wijaya, 2018). DBH is provided to regions as compensation for the utilization of natural resources in those areas. The results of this study indicate that if a region has abundant natural resources, the IPM in that region can grow more rapidly.

CONCLUSION

Based on the discussion in the previous chapter, several important conclusions can be drawn regarding the influence of various factors on the Human Development Index (IPM) in

districts/cities across Indonesia. First, Local Revenue (PAD) has been proven to have a significant positive effect on IPM, both in all districts/cities in Indonesia as well as in districts/cities categorized under Very High, High, Medium, and Low IPM categories. Second, the General Allocation Fund (DAU) shows a significant negative effect on IPM across all districts/cities in Indonesia, as well as in districts/cities with Very High, High, Medium, and Low IPM categories. Third, the Special Allocation Fund (DAK) has a significant positive effect on IPM in all districts/cities in Indonesia, as well as in districts/cities with Very High and High IPM categories. However, DAK does not have a significant effect on IPM in districts/cities with Medium and Low IPM categories. Fourth, the Revenue Sharing Fund (DBH) also has a significant positive effect on IPM in all districts/cities in Indonesia, as well as in districts/cities with Very High, High, and Medium IPM categories. However, DBH does not show a significant effect on IPM in districts/cities with Low IPM categories.

REFERENCE

- Asari, N. M. A., & Suardana, K. A. (2018). Pengaruh Pendapatan Asli Daerah, Dana Perimbangan, dan Lain-Lain Pendapatan Daerah yang Sah pada Belanja Daerah. *E-Jurnal Akuntansi*, 25(2), 877–904. <https://doi.org/10.24843/EJA.2018.v25.i02.p03>
- Badan Pusat Statistik Indonesia. (2022). *Indeks Pembangunan Manusia (IPM) Indonesia tahun 2022 mencapai 72,91, meningkat 0,62 poin (0,86 persen) dibandingkan tahun sebelumnya (72,29)*. <https://www.bps.go.id/id/pressrelease/2022/11/15/1931/indeks-pembangunan-manusia--ipm--indonesia-tahun-2022-mencapai-72-91--meningkat-0-62-poin--0-86-persen--dibandingkan-tahun-sebelumnya--72-29-.html>
- De Fretes, P. (2017). Pengaruh dana perimbangan, pendapatan asli daerah, dan pertumbuhan ekonomi terhadap indeks pembangunan manusia di Kabupaten Kepulauan Yapen. *JAE (JURNAL AKUNTANSI DAN EKONOMI)*, 2(2), 1–33.
- Ghozali. (2018). *Aplikasi Statistik Analisis Multivariate (Edisi 9)*. Badan penerbit Universitas Diponegoro.
- Ginting, A. M., Hamzah, M. Z., & Sofilda, E. (2019). Pengaruh dana perimbangan terhadap kemandirian keuangan daerah. *Indonesian Treasury Review: Jurnal Perbendaharaan, Keuangan Negara Dan Kebijakan Publik*, 4(2), 105–127.
- Gujarati, D. N., Porter, D. C., & Gunasekar, S. (2009). Basic econometrics Tata McGraw-Hill Education. *New Delhi*.
- Harahap, R. U. (2011). Pengaruh dana alokasi umum, dana alokasi khusus, dan dana bagi hasil terhadap indeks pembangunan manusia pada kab./kota propinsi Sumatera Utara. *Jurnal Riset Akuntansi Dan Bisnis*, 11(1). <https://jurnal.umsu.ac.id/index.php/akuntan/article/view/403>
- Irianto, Kisnawati, B., Istiarto, & Helmida, BQ. E. (2021). Pengaruh Pendapatan Asli Daerah, Dana Alokasi Umum, Dana Alokasi khusus dan Belanja Modal Terhadap Indeks Pembangunan Manusia (Studi Pada Kabupaten dan Kota di Provinsi Nusa Tenggara Barat). *Jurnal Ganec Swara Vol*, 15(2). <https://www.academia.edu/download/109289084/227.pdf>
- Maulidi, A., Shonhadji, N., Fachruzzaman, F., Sari, R. P., Nuswantara, D. A., & Widuri, R. (2023). Are female CFOs more ethical to the occurrences of financial reporting fraud? Theoretical and empirical evidence from cross-listed firms in the US. *Journal of Financial Crime*, 30(5), 1342–1366. <https://doi.org/10.1108/JFC-07-2022-0170>
- Melgiana, A. C., Rupa, I. W., & Riasning, N. P. (2020). Pengaruh pendapatan asli daerah, dana alokasi umum dan dana alokasi khusus terhadap indeks pembangunan manusia dengan belanja modal sebagai variabel intervening (studi empiris di kabupaten/kota di provinsi bali). *Jurnal Riset Akuntansi Warmadewa*, 1(1), 45–49.

- Nashshar, M. I., & Mulyana, B. (2022). Pengaruh dana alokasi khusus terhadap indeks pembangunan manusia dengan belanja modal sebagai variabel mediasi. *Indonesian Treasury Review: Jurnal Perbendaharaan, Keuangan Negara Dan Kebijakan Publik*, 7(3), 255–270.
- Oates, W. E. (1999). An essay on fiscal federalism. *Journal of Economic Literature*, 37(3), 1120–1149.
- Patadang, T. M., Oldy Rotinsulu, T., Pingkan, I., & Rorong, F. (2021). Pengaruh Pendapatan Asli Daerah (Pad), Dana Bagi Hasil (Dbh), Dana Alokasi Umum (Dau), Dan Dana Alokasi Khusus (Dak) Terhadap Indeks Pembangunan Manusia (Ipm) Minahasa Tenggara Dengan Pengeluaran Di Bidang Kesehatan Sebagai Variabel Intervening. Vol. 22. *Jurnal Pembangunan Ekonomi Dan Keuangan Daerah*, 22(2). <https://ejournal.unsrat.ac.id/index.php/jpekd/article/download/35104/32887>
- Riviando, A., Agustin, H., & Halmawati, H. (2019). Pengaruh pendapatan asli daerah, dana alokasi umum dan dana alokasi khusus terhadap indeks pembangunan manusia dengan belanja modal sebagai variabel intervening. *Jurnal Eksplorasi Akuntansi*, 1(1), 1–17.
- Sembiring, E. A. (2011). *Pengaruh pendapatan asli daerah, dana alokasi umum dan dana alokasi khusus terhadap indeks pembangunan manusia di Kabupaten dan Kota Provinsi Sumatera Utara* [PhD Thesis, Universitas Sumatera Utara]. <https://repositori.usu.ac.id/handle/123456789/42358>
- Setiawan, A. (2021). *Sejarah Perimbangan Keuangan*. Media Keuangan. <https://mediakeuangan.kemenkeu.go.id/article/show/sejarah-perimbangan-keuangan>
- Suhyanto, O., Juanda, B., Fauzi, A., & Rustiadi, E. (2020). Pengaruh dana transfer dana desa dan pad terhadap indeks pembangunan manusia di Provinsi Jawa Barat. *EKUITAS (Jurnal Ekonomi Dan Keuangan)*, 4(3), 285–305.
- Sulastri, E., & Efendri, E. (2021). Analisis Pengaruh PAD, DAU, DAK dan DBH terhadap indeks pembangunan manusia seluruh provinsi di Kalimantan tahun anggaran 2015-2019. *Jurnal Riset Manajemen Dan Bisnis*, 6(2), 85–96.
- Undang-Undang Dasar (UUD) Tahun 1945 (1945).
- Undang-Undang (UU) Nomor 1 Tahun 2022 Tentang Hubungan Keuangan Antara Pemerintah Pusat Dan Pemerintah Daerah, Pub. L. No. 1 (2022).
- Undang-Undang (UU) Nomor 25 Tahun 1999 Tentang Perimbangan Keuangan Antara Pemerintah Pusat Dan Daerah, Pub. L. No. 25 (1999).
- Undang-Undang (UU) Nomor 33 Tahun 2004 Tentang Perimbangan Keuangan Antara Pemerintah Pusat Dan Pemerintahan Daerah, Pub. L. No. 33 (2004).
- United Nations Development Programme. (2019). *Indonesia breaks into high human development category group | United Nations Development Programme*. <https://www.undp.org/indonesia/press-releases/indonesia-breaks-high-human-development-category-group>
- Widarjono, A. (2007). *Ekonometrika: Teori dan aplikasi untuk ekonomi dan bisnis*. Yogyakarta: Ekonisia.
- Wijaya, L. (2018). *Analisis Pengaruh Pendapatan Asli Daerah dan Dana Perimbangan Terhadap Indeks Pembangunan Manusia (Studi Kasus pada Pemerintah Kabupaten/Kota di Nusa Tenggara Barat Tahun 2011-2016)* [PhD Thesis, Universitas Brawijaya]. <http://repository.ub.ac.id/164631/>