Original Research Article

The Effect of Regional Local Revenue and General Allocation Funds on the Human Development Index in Districts/Cities in East Java 2019-2021

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Abstract

This research aims to examine the influence of local revenue and general allocation funds on the human development index. This research uses a quantitative approach with a simple regression analysis method. This research uses samples in the form of districts/cities in East Java Province. The type of data used in this research is secondary data. The secondary data used comes from the Directorate General of Financial Balance and the Central Statistics Agency. The period of this research is 2019 to 2021. The results of this research show that there is an influence between local original income and general allocation funds on the human development index.
Keywords: Original Regional Income, General Allocation Fund, Human Development Index.
Jel Classification: H20; H23; 010

INTRODUCTION

The human development index (HDI) acts as an indicator in measuring the level of success in improving people's quality of life. HDI is an important component that needs to be considered in achieving the goal of regional autonomy (REGAUT). HDI is needed to review the progress and success of regional development which is proxied through three elements including the economy or a decent standard of living, education attained, and health. Patadang, *et al.,* (2021) stated that the increase in HDI was affected by many factors several of them, namely regional local revenue (RLR) and general allocation funds (GAF).

REGAUT as regulated under Law of the Republic of Indonesia No. 23 of 2014 aims to increase independence in minimizing regional government dependence on the central government. REGAUT is expected to be able to increase regional fiscal strength in exploring and managing regional potential. So REGAUT is expected to be able to minimize regional government dependence on the central government in terms of financial capacity. REGAUT is an opportunity for local governments and communities to develop the regional economy based on the potential of each region. Economic development in each region requires

contributions from various components. RLR and GAF are indicators of the success of REGAUT in each region.

RLR can be used to reflect the quality of REGAUT, as RLR functions as the goal of every local government. The higher RLR, it is hoped can minimize regional dependence on balancing funds. Research by Lestari, *et al.,* (2023) and Sembiring (2019) shows that RLR affects HDI. Research by Wijayanti and Darsana (2018) shows that RLR does not affect HDI. The difference in the results of this study is that an increase in HDI did not accompany the increase in RLR.

The diversity of potential in each region gives rise to different RLR revenues. REGAUT provides an opportunity for regions to manage regional potential independently. However, each region has uniqueness and diversity of potential, and different transfer funds are needed from the central government to regional governments. PMK.06/PMK.07/2012 explains that the financial source to support running the government is to transfer funds from the central government. Transfers provided by the central government to regional governments are state revenues to fund the implementation of fiscal decentralization. GAF as one of the components in central government transfers to

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regional governments is funds sourced from the State Revenue and Expenditure Budget to fund regional programs in the implementation of decentralization. Research by Lestari, *et al.,* (2023) and Riviando, *et al.,* (2019) shows that GAF affects HDI. Research by Wijayanti and Darsana (2018) shows that GAF does not affect HDI. The difference in the results of this research is because the higher GAF does not necessarily increase the HDI in regencies/cities throughout East Java Province.

RLR as revenue obtained by the regions and GAF as a transfer from the central government to regional governments are expected to improve the quality of services to the community. The higher the government's ability to provide services to the community, the greater the opportunity to create prosperity for the community.

Formulation of the Problem
Based on the background stated above, the problems studied in this research are:
1. Does RLR have an effect on HDI in Regencies/Cities throughout East Java in 2019-2021?
2. Does GAF have an effect on HDI in Regencies/Cities throughout East Java in 2019-2021?

Research Purposes
The aim of the research based on the description in the background is to analyze:
1. The effect of RLR on HDI in Regencies/Cities throughout East Java.
2. The effect of GAF on HDI in Regencies/Cities throughout East Java.

Benefits of Research
The benefits of research based on the description in the background are to:
a. **Writer:** This research is an evaluation of the knowledge that the author has obtained and adds to the author's knowledge of RLR, GAF, and HDI in Regencies/Cities throughout East Java in 2019-2021.
b. **Regency/City Governments throughout East Java:** It is hoped that the results of this research will provide additional information for the Government Districts/Cities throughout East Java in managing funding sources along with other components related to RLR, GAF, and HDI.
c. **Other parties:** The results of this research can become knowledge for readers and become additional references for further research.

LITERATURE REVIEW
Theoretical Basis
1. Economic Growth Theory
a. **Walt Whitman Rostow's theory:** Walt Whitman's theory of economic growth divides economic growth into five stages. One of them is the prerequisite stage for takeoff. At this stage, Rostow argued that economic growth could occur with the strength of society itself. Economic growth can be seen from regional government efforts to increase RLR. Natural resources and human resources also help accelerate economic growth (Lestari *et al.,* 2023). RLR in this research as an independent variable is a component that influences economic growth according to the theory of economic growth by Walt Whitman Rostow.

b. **John Maynard Keynes:** The theory of economic growth according to John Maynard Keynes explains that the public sector participates in improving the economy in general. GAF is a step from the central government to assist regional governments in implementing regional development. According to Lestari, *et al.,* (2018), GAF is a central government transfer fund to regional governments in the context of implementing decentralization. GAF can reduce fiscal gaps between regions. GAF is used to fund regional development processes and create prosperity throughout society.

c. **Simon Kuznets:** The theory of economic growth according to Simon Kuznets explains that economic growth is an increase in the long-term capacity of a country to provide various kinds of economic goods to its people. The availability of economic goods is a stimulus to improve community welfare which is reflected through HDI (Wijayanti and Darsana, 2018). HDI is a measure of community welfare which is a reflection of the economic growth achieved in an area.

2. RLR
Law Number 33 of 2004 Article 1, "RLR is revenue originating from various sources obtained through the region which is collected based on regional regulations by the provisions and applicable laws and regulations". The aim of RLR according to the Directorate General of Fiscal Balance (DGFB) is to manage and fund the implementation of REGAUT according to the potential of each region. Sources of RLR include regional taxes, regional levies, the results of separated regional wealth management, and other legitimate regional original income. Patadang, *et al.,* (2021) increasing RLR can have an impact on HDI. RLR can contribute to increasing or reducing regional government dependence on the central government. High RLR indicates that the local government has succeeded in implementing REGAUT well (Wijayanti and Darsana, 2018).

3. GAF
Law no. 33 of 2004, "GAF is funds sourced from State Budget (SB) revenues which provide equal distribution of financial capacity between regions". The aim of GAF according to DGFB is to meet regional needs as an implementation of decentralization. Sembiring (2019), GAF contributes to providing equal financial capacity between regions to finance spending needs.

Wijayanti and Darsana (2018), RLR or GAF revenues can increase gross regional domestic product (GRDP) revenues. GAF is expected to be able to overcome financial gaps between regions in implementing regional development programs.

4. HDI

According to Gulo, *et al.,* (2023), HDI is an indicator in measuring the level of success in improving the quality of human life. HDI consists of three elements, namely economic or decent living standards, education attained, and health. The increase in HDI is affected by RLR and GAF (Patadang, *et al.,* 2021). IPM is expected to be able to contribute to reviewing the development and success of regional development.

Previous Research

Wijayanti and Darsana (2018), regarding the effect of RLR and GAF on HDI through economic growth as an intervening variable. The results of this study show that RLR and GAF do not affect HDI. This research uses annual data for the 2008-2013 period in Bali Province.

Riviando, *et al.,* (2019), regarding the effect of RLR, GAF, and SAF on HDI with capital expenditure as an intervening variable. The results of this study show that RLR affects HDI. GAF influences HDI. This research uses annual data for the 2015-2017 period for districts/cities in West Sumatra Province.

Sembiring (2019), regarding the effect of RLR, GAF, and special allocation funds (SAF) on HDI in Regencies/Cities of North Sumatra Province. The results of this study show that RLR has a positive effect on HDI. GAF and SAF harm HDI. This research uses annual data for the 2007-2014 period for districts/cities in North Sumatra.

Patadang, *et al.,* (2021), regarding the effect of RLR, revenue sharing funds (DBH), GAF, and SAF on HDI with expenditure in the health sector as an intervening variable in Southeast Minahasa Regency. The results of this study show that RLR does not affect HDI. DBH influences HDI. This research uses annual data for the 2009-2019 period in Southeast Minahasa Regency.

Lestari *et al.,* (2023), regarding the effect of RLR, GAF, and SAF on HDI with economic growth as an intervening variable in Langkat Regency. The results of this study show that RLR does not affect HDI. GAF influences HDI. This research uses annual data for the 2017-2021 period in Langkat Regency.

Gulo, *et al.,* (2023), regarding the effect of SAF, GAF, and RLR on HDI in North Sumatra using. The results of this research show that GAF and RLR have an effect on HDI in North Sumatra Province. This research

uses annual data for the 2015-2019 period in North Sumatra Province.

The similarity between this research and previous research lies in the scope of the research. The difference between this research and previous research lies in the time and location of the research. This research uses the 2019-2021 period. The location of this research is in regencies/cities throughout East Java.

Conceptual Framework

The conceptual framework based on the description of the theoretical basis and results of previous research is as follows:
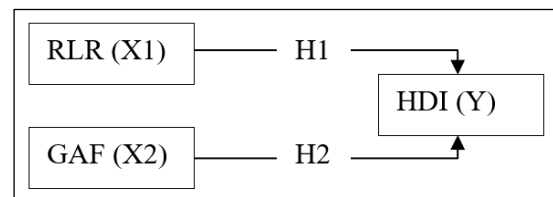
Hypothesis
1. The relationship between RLR and HDI.

The level of RLR acceptance can improve the quality of public services. The convenience felt by the community due to improving the quality of public services can have an impact on improving decent living standards, education attainment, and health. Lestari, *et al.,* (2023) show that RLR affects HDI. Research by Gulo, *et al.,* (2023) also proves similar results where RLR affects HDI.

H_1: RLR affects HDI.

2. Relationship between GAF and HDI.

The level of GAF revenues can help regions manage their potential. The government contributes to improving the economy in general. Lestari, *et al.,* (2023) show that GAF influences HDI. Research conducted by Gulo, *et al.,* (2023) also shows similar results where GAF affects HDI.

H_2: GAF affects HDI.

RESEARCH METHODS
Types of Research

This research is included in explanatory research. Explanatory research aims to explain the causality between variables (Sugiyono, 2013). This research uses a quantitative approach with a simple regression analysis method. The scope of this research was obtained from districts/cities throughout East Java. The data source used is secondary data sourced from budget realization reports and HDI. The research data used is secondary data. Secondary data was obtained through the DGFB and the Central Statistics Agency (CSA) of Regencies/Cities throughout East Java. The type of data in this research is panel data. The cross-section data used in this research is all regencies/cities throughout East Java. The time series data used in the

research is a time interval consisting of 3 years starting from 2019 to 2021.

Research Population, Size, and Sampling Technique
The population in this study were regencies/cities throughout East Java. According to Sugiyono (2013), the sample is part of the population. The determination of samples is taken through saturated samples. The sample used is data on RLR, GAF, and HDI obtained in 2019-2021.

Research Variable
Based on the literature review and hypothesis formulation, the variables in this research were determined to include:
1. **Independent Variable:** Independent variables are variables that influence the emergence of dependent variables (Sugiyono, 2013). The independent variables in this research are RLR and GAF.
2. **Dependent Variable:** A dependent variable is a variable that is influenced by the existence of an independent variable (Sugiyono, 2013). The dependent variable in this research is HDI.

Data Collection Procedures
The scope of this research is districts/cities throughout East Java. The data used in this research is secondary data sourced from DGFB (djpk.kemenkeu.go.id) and CSA (bps.go.id). Secondary data originating from DGFB is the budget realization report and secondary data originating from CSA is HDI data in Regencies/Cities throughout East Java. The research sample was taken using a saturated sample (census).

Analysis Techniques
1. **Classic assumption test**
Ghozali (2021) stated that the classical assumption test consists of a normality test, multicollinearity test, and heteroscedasticity test.
a. **Normality Test:** Tests are carried out to determine whether the data is normally distributed or not. The normality test can be carried out using the One-Sample Kolmogorov-Smirnov (1-Sample KS) test.

The data in this study can be said to be normal if it has a probability value above 0.05.
b. **Multicollinearity Test:** The multicollinearity test can be carried out by looking at the tolerance value and VIF (Variance Inflation Factor) value. The values commonly used to indicate multicollinearity are tolerance values ≤ 0.10 or VIF values ≥10.
c. **Heteroscedasticity Test:** The Heteroscedasticity Test aims to determine whether there is a similarity in the variance of the residuals with other observations. The basis for decision-making in the heteroscedasticity test is as follows:
   1. If there is a certain pattern that can form a regular pattern then heteroscedasticity occurs.
   2. If no pattern can form a regular pattern, then heteroscedasticity does not occur.

2. **Hypothesis testing**
a. **F–Simultaneous Statistical Test:** The simultaneous F-test aims to test the influence of all independent variables together on the dependent variable. The hypothesis is rejected when the significance value is greater than 5% (0.05). The hypothesis is accepted when the significance value is smaller than 5% (0.05).
b. **Partial t-statistical test:** The partial t-test aims to test the influence of individual independent variables on the dependent variable. The hypothesis is rejected when the significance value is greater than 5% (0.05). If the significance value is smaller than 5% (0.05) then the hypothesis is accepted.
c. **Coefficient of Determination:** The coefficient of determination aims to test the model's ability to explain variations in the dependent variable. The r square value is between zero and one. The independent variable increasingly provides all the information needed to predict the dependent variable the closer the r square value is to one.

RESULTS AND DISCUSSION
Research result
1. **Classic assumption test**
a. **Normality test**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residuals
N		114
Normal Parametersa	Mean	.0000000
	Std. Deviation	4.15643735
Most Extreme Differences	Absolute	,055
	Positive	,055
	Negative	-.032
Kolmogorov-Smirnov Z		,590
Asymp. Sig. (2-tailed)		,878

Based on the Kolmogorov-Smirnov test table, the residual data distribution meets the normality assumption. The results of the significant value between the RLR, GAF, and HDI variables are at 0.878 > 0.05.

b. Multicollinearity Test

Coefficients					
Model		Q	Sig.	Collinearity Statistics	
				Tolerance	VIF
1	(Constant)	82,296	,000		
	Locally-generated revenue	6,361	,000	,929	1,077
	General Allocation Fund	-3,603	,000	,929	1,077

The tolerance value of RLR (0.929), and GAF (0.929) towards HDI, where 0.929 > 0.1. These results indicate that there are no symptoms of multicollinearity between the independent variables. The VIF value of RLR (1.077), GAF (1.077) against HDI, where 1.077 < 10. This result shows that there are no symptoms of multicollinearity between the independent variables.

c. Heteroscedasticity Test
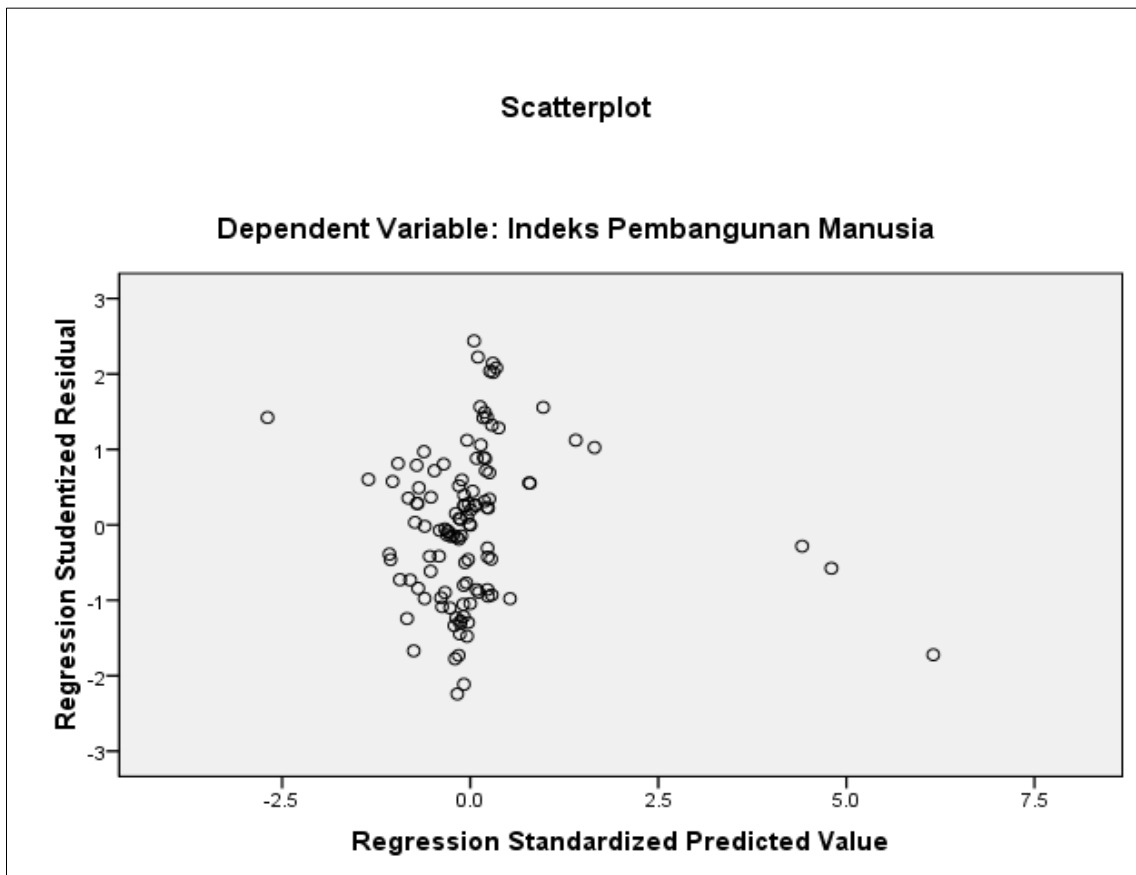
Based on the image above, the pattern results are obtained and the points spread above and below the number 0 on the Y-axis. These results indicate that there are no symptoms of heteroscedasticity.

2. Hypothesis testing
1. F - Simultaneous Statistical Test

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	780,435	2	390.217	22,188	,000a
	Residual	1952.185	111	17,587		
	Total	**2732.620**	**113**			

Based on the table above, it is known that the significant value for the RLR and GAF variables is 0.00 < 0.05. These results indicate that RLR and GAF simultaneously affect HDI.

2. t – Partial Statistical Test

Coefficients					
Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	72,873	,885	82,296	,000
	Locally-generated revenue	3.376E-12	,000	6,361	,000
	General Allocation Fund	-2.502E-12	,000	-3,603	,000

1) RLR testing against HDI. The significance value of RLR is 0.00<0.05, meaning that RLR has a partial effect on HDI.

H1:   RLR has a partial effect on HDI.

2) GAF testing against HDI. The significance value of GAF is 0.00<0.05, meaning that GAF has a partial effect on HDI.

H2:   GAF has a partial effect on HDI.

3. Coefficient of Determination

Model Summary					
odel	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.845a	,714	,709	1.67749	,654

The R Square value is 0.714. These results show a close relationship between HDI RLR and GAF. RLR and GAF affect HDI by 71.4%.

DISCUSSION

1. The effect of RLR on HDI in Regencies/Cities throughout East Java Province

Walt Whitman's theory of economic growth divides economic growth into five stages. One of them is the prerequisite stage for takeoff. At this stage, Rostow argued that economic growth could occur with the strength of society itself. Economic growth can be seen from the efforts made by regional governments to increase RLR which increases and can be managed optimally and well so that it can be seen that the role of REGAUT in empowering regional potential has been running well.

Based on the results of the regression test, it shows that the research analysis is by the hypothesis that has been proposed, namely that RLR has a partially significant effect on HDI. These results indicate that RLR is one of the determining factors in allocating HDI. This shows that Regency/City Governments throughout East Java Province depend on RLR as a source of increasing HDI. This result is in line with Gulo's (2023) research that RLR has a positive and significant effect on HDI. Patadang, *et al.,* (2021) state that the increase in HDI is affected by many factors, and one of the factors is RLR. This research is not in line with the research, and Darsana (2018) states that RLR does not affect HDI. The difference in the results of this study is that an increase in HDI did not accompany the increase in RLR.

2. The effect of GAF on HDI in Regencies/Cities throughout East Java Province

The theory of economic growth according to John Maynard Keynes explains that the public sector participates in improving the economy in general. JM Keynes argued that the government could increase and decrease aggregate demand to overcome turmoil without eliminating capitalism. GAF is a step from the central government to assist regional governments in implementing regional development.

Based on the results of the regression test, it shows that the research analysis is by the hypothesis that has been proposed, namely that GAF has a partially significant effect on HDI. These results indicate that GAF is a determining factor in increasing HDI. These results are in line with Gulo's (2023) research that GAF has a positive and significant effect on HDI. According to Patadang, *et al.,* (2021), the increase in HDI is affected by many factors and one of the factors is GAF. This research is not in line with research by Wijayanti and Darsana (2018) that GAF does not affect HDI. The difference in the results of this research is because the higher GAF does not necessarily increase the HDI in regencies/cities throughout East Java Province.

CONCLUSIONS AND RECOMMENDATIONS

1. Conclusion

This research aims to analyze the effect of RLR and GAF on HDI in Regencies/Cities throughout East Java in 2019-2021. Based on the results and data analysis, the following conclusions can be drawn:

a. RLR has a partial effect on HDI.
b. GAF has a partial effect on HDI.

2. Suggestion

The suggestion for future researchers is to add other SB components as variables in determining their effect on HDI so that they can hopefully get more accurate results. This is because in this study, the coefficient of determination value was still low, namely at the level of 71.4%.

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