Journal for Re Attach Therapy and Developmental Diversities
eISSN: 2589-7799
2023 April; 6 (4s): 294-300

The Effect of Government Expenditure on Education and Health on Human Development Index in Boven Digoel District

Agnes Lutherani. Ch. P.Lapian[1*], Een Novritha Walewangko[1]. Dennij Mandeij [1], Lis M.Yapanto[2]

[1]Department of Development Economics, Faculty of Economics and Business, Sam Ratulangi University, Manado 95115, Indonesia
[2]Universitas Negeri Gorontalo
Email correspondence: [1*]
agneslapian@unsrat.ac.id

Received: 20- February -2023
Revised: 24- March -2023
Accepted:19-April-2023

ABSTRACT

The Human Development Index (HDI) is a comparative measure of life expectancy, education, and living standards for all countries. HDI is used as an indicator to assess the quality aspects of development and to classify whether a country is a developed country, a developing country, or an underdeveloped country and also to measure the effect of economic policies on the quality of life.This study aims to determine the effect of government spending on education and health on the human development index in Boven Digoel Regency.The data used in this study is secondary data obtained from the Regional Development Planning Agency (Bappeda) of Boven Digoel Regency and Djpk.Kemenkeu.go.id. The analytical model used is multiple linear regression, using SPSS version 23. The regression results show that government spending on education has no significant effect on the human development index with a significance value of 0.126 > 0.05. Meanwhile, government spending in the health sector has a significant effect on the human development index with a significance value of 0.005< 0.05. However, simultaneously or jointly have a significant effect on the human development index with a significance value of 0.005.

Keywords: Education, Health, Human Development Index.

INTRODUCTION

The Human Development Index (HDI) is a comparative measure of life expectancy, education, and living standards for all countries. HDI is used as an indicator to assess the quality aspects of development and to classify whether a country is a developed country, a developing country, or an underdeveloped country and also to measure the effect of economic policies on the quality of life. (Directorate of Statistical Analysis and Development of BPS, 2015). The human development index is one indicator for the progress of a country, said to be advanced not only calculated from gross domestic income but also includes aspects of life expectancy and the education of its people. (Widodo et al., 2011).Development is a tool used to achieve the nation's goals and economic growth is one indicator to assess the success of a country's development. The development paradigm that is currently developing is economic growth as measured by human development as seen by the level of quality of human life in each country. One of the benchmarks used in viewing the quality of human life is the Human Development Index (HDI) which is measured through the quality of education, health and economic levels (purchasing power). (Mirza, 2012:1)

The paradigm of human development according to the United Nations Development Program (UNDP) is as a process of expanding choices for the population (enlarging the choices of people) which can be seen as a process of efforts towards expanding choices and at the same time as the level achieved from these efforts. To achieve these human development goals, there are four main things that must be considered, namely productivity, equity, sustainability, and empowerment.Education and Health are fundamental development goals in a region. According to Meier and Rauch (in Aloysius Gunadi Brata, 2002, p. 4) education, or more broadly is human capital, can contribute to development. This is because education is essentially a form of saving, leading to the accumulation of human capital and growth in aggregate output if human capital is an input in the aggregate production function. Health is the essence of well-being, and education is essential to achieving a decent life.

In measuring HDI, health and education indicators are one of the main components besides income, because health and education are investments to support economic development and have an important role in poverty reduction efforts. With good and adequate human resources, the implementation of development will be smoother. The government should pay attention to this, especially if you view humans as subjects and objects of development, so that human development which then supports development in various sectors will create prosperity for humans who are within the government's territory (Baiq, 2017).

The Human Development Index (IPM) in Boven Digoel Regency in the last 10 years still looks low and growth (IPM) is still slow when compared to other regencies in Papua Province and other regencies in Indonesia. So that the distribution of development has not been fully felt by residents in the Boven Digoel district. So, the government of Boven Digoel Regency still needs special attention from the central and provincial governments of Papua, especially in the fields of Education and Health, so as to increase the Human Development Index in Boven Digoel Regency. Boven Digoel Regency itself is one of 29 regencies or cities in Papua Province. Boven Digoel Regency was formed in 2002, based on the Law of the Republic of Indonesia Number 26 of 2002,

RESEARCH METHODS

Data is information about something that is proven in research. The data used in this study is secondary data on government spending on education and health on the human development index in Boven Digoel Regency. The data sources in this study were obtained from several related sources, namely the Regional Development Planning Agency (Bappeda) of Boven Digoel Regency and Djpk.go.id. In addition, relevant data is also obtained from various reading sources and also the internet.

Method of collecting data

Data collection method is the method used to collect research data. The data used is secondary data. Secondary data is data obtained or collected by people conducting research from existing sources. The method of collecting data and information in this study uses a literature study. Literature study is an activity of studying, exploring, and quoting theories or concepts from a number of literatures, both books, journals, magazines, newspapers or other written works that are relevant to the topic, focus or research variable (Dr.widodo:75).

Data analysis method

The development paradigm places humans as the focus and ultimate goal of development, namely achieving control over resources, increasing education and improving health degrees (Suharto, 2010:73).

The formula for calculating the Human Development Index.

HDI = 1/3 (X (1) + X (2) + X (3) .

Where :

X(1) : Life expectancy index

X(2) :Education index = 2/3 (literacy index) + 1/3 (index flat-flat)

X(3) :Decent standard of living index.

Each HDI component index is a comparison between the difference in the value of an indicator and its minimum value with the difference between the maximum value and the minimum value of the indicator concerned. The formula is as follows:

Index X (i) = (X(i) – X(i) min) / (X(i) max – X(i) min)

Where:

X(i) :The i-th indicator (i = 1, 2, 3)

X(i)max : Markmaximum X(i)

X(i) min : Minimum value X (i)

The maximum and minimum value of the indicator X (i) Suharto,(2010: 80)

The analytical model used is multiple linear analysis using SPSS version 23 program. Multiple linear regression analysis is a linear relationship between two or more independent variables (X1, X2,….Xn) and the dependent variable (Y). This analysis is used to determine the direction of the relationship between the independent

variable and the dependent variable whether each independent variable is positively or negatively related and to predict the value of the dependent variable if the value of the independent variable increases or decreases. Multiple linear regression equation as follows:

Y = o + 1X1 + 2X2 + e; where :

Y = Human Development Index (Bound Variable)
o = Constant
1 and 2 = Regression Coefficient
X1 = Government Expenditure on Education (Independent Variable 1)
X2 = Government Expenditure on Health (Independent Variable 2)
e = Confounding Parameter

To test the research hypothesis using Regression Test, Correlation Test (R), R^2 Test, Classical Assumption Test, F test (simultaneous test), t test (partial test), to determine the magnitude of the influence between the independent variable and the dependent variable. Normality test

Testing the normality of the data is to find out whether the statistical model of the research variables has a normal data distribution or not. The process of testing the normality of the data is carried out by paying attention to the spread of data (dots) on the Normal P-Plot of Regression Standardized Residual from the independent variable.

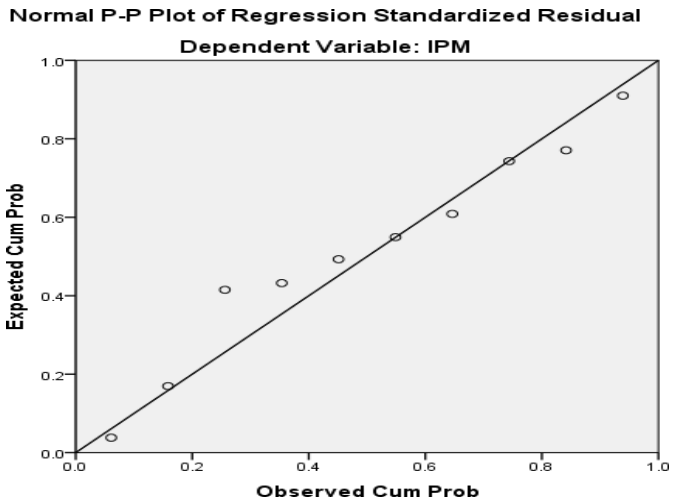
RESEARCH RESULTS AND DISCUSSION

Classic assumption test This test is carried out to see whether the data used has deviation from the classical assumptions or not. In the assumption test, there are 3 tests used, namely normality test, multicollinearity test and heteroscedasticity test. The results of the 3 tests used are as follows:

1. Normality test

The normality test is used to test whether in the regression model, the confounding or residual variables have a normal distribution or not. To test the normality of the data, it is done by paying attention to the spread of data (dots) on the Normal P-Plot Of Regression Standardized Residual from the independent variable.

Table 4.1
Normality Test Results



Based on the PP Plot table above, it can be seen that the distribution of the data forms or follows a linear line, so it can be said that the data is normally distributed.

2. Multicollinearity Test

The multicollinearity test aims to test whether the regression model found a correlation between the independent variables. A good model should not have a correlation between the independent variables. To find out the existence of multicollinearity in the regression model, it can be seen from the value of Tolerance and Variance Inflation Factor (VIF).

Table 4.2
Multicollinearity Test Results

Coefficientsa								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	56,997	1,460		39,029	.000		
	EDUCATION	-.023	.013	-.321	-1,738	.126	.944	1.060
	HEALTH	.036	.009	.746	4.034	.005	.944	1.060

a. Dependent Variable: HDI

Based on the results of table 4.2, above shows that the Education variable (X1) and the Health variable (X2) have a tolerance value greater than 0.1 or 0.944 > 0.1 and the*Variance Inflation Factor (VIF)*has a value of less than 10 or 1,060 < 10, it can be said that the data does not experience multicollinearity.

3. Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals or other observations. In this test, the Glejser test was carried out.

Table 4.3
Heteroscedasticity Test Results

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,448	.895		1.618	.150
	EDUCATION	-.009	.008	-.386	-1.073	.319
	HEALTH	-.002	.005	-157	-.435	.676

a. Dependent Variable: ABS_RES

Based on the results of Table 4.3, above shows that the values of column t and Sig. The Education (X1) and Health (X2) variables have a significance value above 0.05. Education variable (X1) has a sig value of 0.319. While the Health variable (X2) has a sig value of 0.676, it can be concluded that in this model there is no heteroscedasticity or in other words, all the independent variables contained in this model have the same or homogeneous distribution of variance.

4. Autocorrelation Test

The autocorrelation test is used to determine whether there is a deviation from the classical assumption of autocorrelation that occurs between the residuals in one observation and other observations in the regression model. In this study, the Durbin-Watson value was used to test the presence or absence of autocorrelation in this model.

Table 4.4
Autocorrelation Test Results

Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.880a	.774	.709	.93594	1.868

a. Predictors: (Constant), HEALTH, EDUCATION
b. Dependent Variable: HDI

Based on the results of table 4.4, above shows that the Durbin-Watson (DW) value is 1.868 and the DU value is 1.641. It is said to be free from autocorrelation if the DW value is between DU and 4-DU or DU < DW < 4-DU, then the results obtained are 1.641 < 1.868 < (4-2,359). So it can be concluded that the model in this study is free from autocorrelation problems.

Multiple Linear Regression

Multiple linear regression testing is carried out with one dependent variable and more than one independent variable with the following regression equation:

Y = o + 1X1 + 2X2 + e ,

Here are the results of Multiple Linear Regression Analysis:

Table 4.5
Multiple Linear Regression Analysis Results

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	56,997	1,460		39,029	.000
	EDUCATION	-.023	.013	-.321	-1,738	.126
	HEALTH	.036	.009	.746	4.034	.005

a. Dependent Variable: HDI

Based on data analysis using SPSS.23, the results of the regression equation are as follows:

Y= 56.997 + 0.023 X1 + 0.036 X2 + e

The regression equation above shows the relationship between the independent variable and the dependent variable partially from the equation it can be concluded that:

1. The constant value is 56.997, meaning that if there is no change in the Education and Health variables (X1 and X2 values are 0), then the Human Development Index in Boven Digoel Regency will increase by 56.997%.
2. If Government Expenditure on Education increases by 1%, then the Human Development Index will increase by 0.023%.
3. If Government Expenditure on Health Sector increases by 1%, then the Human Development Index will increase by 0.036%.

Based on the results of the analysis by observing the column t and sig. It can be explained as follows:

1. **The Influence of Government Expenditure Variables in the Education Sector on the Human Development Index**

The variable of government expenditure in the education sector partially in this study has less effect on the human development index. This can be seen in the t-count value for the government expenditure variable in the

education sector which is 1.738, this value is smaller than the t-table value of 1.812 or t-count 1.738 < 1.812 and when viewed from the significance value is 0.126 > 0.05. Thus Ho is accepted and H1 is rejected. So it can be concluded that the effect of the variable government spending on education is less influential and not significant on the human development index.

However, in connection with that, the government of Boven Digoel Regency continues to strive and strive to maximize the budget allocation in the education sector properly and in addition, the government also strives and strives to improve educational facilities and infrastructure throughout the Boven Digoel Regency area for various levels of education, so that can create a better quality of education. So that it can encourage an increase in the Human Development Index in Boven Digoel Regency.

CONCLUSION

From the results of research and discussion, several conclusions can be drawn as follows:

1. Government spending on education in this study is known to have no and insignificant effect on the Human Development Index in Boven Digoel Regency. This is because the government has not been able to maximize budget allocations in the education sector properly so that the education sector has not been able to have a positive influence on increasing the Human Development Index in Boven Digoel Regency.

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