

Conference Paper

Government Spending, Gross Domestic Product, Human Development Index (Evidence from East Java Province)

Farida Rahmawati and Meirna Nur Intan

Department Economic Development, Economics Faculty, Universitas Negeri Malang

Abstract

Government spending is expected to improve the Human Development Index (HDI) in order to increase public welfare. Theoretically, if the number of government expenditure is increasing then the Human Development Index (HDI) will be higher as well. Based on earlier research, it was found few differences about the result of influence Government spending to Human Index. The purpose of the study was to analyze the influence of government spending and Gross Domestic Product to the Human Development Index of East Java Province (during 2014-2017). The research method using descriptive quantitative approach. Local government expenditures were analyzed by direct local government spending by looking at three aspects namely employees expenditure, spending on goods and services, and capital expenditures. Whereas, for the GDP per capita income is analyzed based on three aspects: production, income, and expenditure. Then the human development index to see the effects of these two variables based on three dimensions that exist in the human development index healthiness dimensions, dimensions of knowledge, and economic dimensions. The results showed that the local government spending income and the GDP per capita income has a significant effect on the human development index. Government spending has a significant influence on the educational dimension, while GDP per capita has a significant effect on the purchasing power of people thus affecting the economic dimension.

Keywords: Government spending, Gross Domestic Product, Human Development Index

Corresponding Author:

Farida Rahmawati

farida.rahmawati.fe@um.ac.id

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1. Introduction

Developed and developing countries in the welfare of the population are done through the development process. In the implementation of the current economic development can also be done by improving the quality of human resources. Wherein, the quality of human resources can be viewed through the Human Development Index (HDI), which is measured by the quality level of education, health and economic (expenditure). The value of the Human Development Index (HDI) of Indonesia from 2014 to 2017 issued

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by the Central Statistics Agency (BPS) said almost every province in Indonesia has increased although not optimal.

Human Development Index (HDI) prepared as one of the alternative indicators, in addition to national income per capita, to assess the success of the construction carried out by a State (Harahap, 2011). Hopefully, by the Human Development Index (HDI) and the transfer of authority from the central government to the local government human resource quality can be increased. So it can affect economic growth in the region.

Macroeconomic conditions in Java showed a relatively good although not optimal. There are several indicators to see how the development of an area. First, judging from the results of construction output which reflected aspects of poverty. Secondly, judging from public welfare with indicators of the Human Development Index (HDI) (Sasana, 2012). Based on the calculation of HDI in six provinces in Java, Jakarta is ranked first at the national level. As for the other provinces on the island of Java has increased every year in the development of HDI. Lodging in East Java province with a population which is quite large, but the value of the lowest HDI of East Java province from other provinces in Java. The following HDI data are presented in six provinces in Java.

TABLE 1: Human Development Index (HDI) At 6 provinces in Java Island Year

District / City	IPM			
	2014	2015	2016	2017
DKI JAKARTA	78.39	78.99	79.60	80.06
WEST JAVA	68.80	69.50	70.05	70.69
CENTRAL JAVA	68.78	69.49	69.98	70.52
IN YOGYAKARTA	76.81	77.59	78.38	78.89
EAST JAVA	68.14	68.95	69.74	70.27
BANTEN	69.89	70.27	70.96	71.42

Source: National Statistics 2014-2017

Human Development Index can be achieved through increased longevity and healthy life, knowledge and a decent standard of living. In reaching decent living standards it is in the form of purchasing power or spending. If spending someone bigger then that person can fulfill primary needs such as clothing, food, and shelter. But they can also meet other needs such as education and health. In meeting these needs needed enough revenue anyway. Revenue in question is obtained by dividing income per capita Gross Domestic Product (GDP) at current prices by mid-year population (East Java, Central Bureau of Statistics, 2017). Per capita income also reflects the purchasing power of the population in an area, Gross Regional Domestic Product (GDP) per capita in 2017 was the highest in the town of Kediri, namely Rp 408.66 million followed by Surabaya RP 172.21 million;

Gresik Rp 92.31 million; Sidoarjo regency Rp 79.81 million; and Rp 72.39 million Malang (East Java, Central Bureau of Statistics, 2017). GDP per capita gives an idea of how much income is received in a local community. The high GRDP in the region showed that the population in the region can meet their needs. While the HDI provides a better picture of the extent of human development because in the view of the three indicators.

The local government has a very big role in improving the welfare of the community or local government fiscal population. Policy right through the Regional Budget (APBD) is expected to improve the Human Development Index (HDI) in order to increase public welfare (Sasana, 2012). Improvement of social welfare can be a public facility improvement and meet each indicator contained in the Human Development Index (HDI). In theory, if the number of shopping areas is high then the Human Development Index (HDI) will be higher as well.

Based on earlier research found few differences or research gap. In addition, the researchers also found some gaps in previous studies. Based Sanggeling 2015 study titled "Effects of Government Spending in Education and Health Sector Against Human Development Index in North Sulawesi". The results shown in this study is positive where government spending has a significant effect on the human development index. Research conducted by Badruddin (2017) with the title "Influence of Regional Income and Expenditure Against Human Development in Yogyakarta Province" variable used is the same ie government spending. However, showed negative results which government expenditure does not have a significant impact on the human development index.

Investigators also found several previous studies that have the same variable that is per capita income like research Zamharir 2016 under the title "The Effect of Economic Growth, Poverty, the GDP per capita and the Minimum Wages Against Human Development Index: A Case Study of 12 Provincial By Category Lower Medium In Indonesia". In this study, researchers focused more on seeing the results of related variables, namely income per capita. The results of this study indicate that the per capita income affects the human development index (positive). While in Suparyati 2014 study entitled "Effect of Economic Freedom and Income Per Capita Against Human Development Index" have the same variable that is per capita income. However, show different results for each variable was nothing to indicate there are positive and negative.

1.1. Local Government Expenditure

Government Regulation (PP) No. 21 Year 2011 on Guidelines for Financial Management as the second revision of Regulation No. 13 In 2006, the classification of expenditure

in the budget system fixed into indirect expenditures and direct spending (Regulation 2011). Indirect spending is local government spending in the form of personnel expenses in the form of salaries and allowances that have been set by law, shopping flowers, spending grants, social assistance spending, spending for the results to the district/city and village administrations, shopping financial assistance, as well as shopping is not suspect. While shopping area of direct expenditure is used for the implementation of the programs and activities of the local governments that personnel expenditure, spending on goods and services, and capital expenditures.

1.2. GRDP Per Capita Income

GDP at current prices illustrate the added value of goods and services is calculated using the price in the current year, while the GDP at constant prices shows the value-added goods and services calculated using prices prevailing in a given year as the base year. The GDP according to current prices are used to determine the ability of economic resources, shifts, and economic structure of a region. Meanwhile, the GDP constant used to determine economic growth in real terms from year to year or that economic growth is not affected by the price factor.

GRDP also be used to determine changes in price by calculating the GDP deflator (implicit index change). The implicit price index is the ratio between the GDP according to current prices and the GDP according to constant prices. Calculation of Gross Domestic Product is conceptually using three kinds of approaches, namely: production approach, expenditure approach, and the income approach.

1.3. Human Development Index

Human development is a process of expanding choices for residents. HDI is an important indicator to measure the success in the effort to build the quality of human life (community/population) are better. IPM explain how residents can access development results in obtaining income, health, education, and so forth (Central Bureau of Statistics, 2017). IPM was introduced by the United Nations Development Program (UNDP) in 1990 and the calculation method was revised in 2010. The HDI was formed based on three indicators, namely longevity and healthy life (a long and healthy life), knowledge (knowledge), and a decent standard of living (decent standard of living). The success of human development can be seen from how much the problems that arise in the community can be addressed.

HDI is an indicator that is used to view the progress of development in the long term (Central Bureau of Statistics, 2017). To see the progress of human development, there are two aspects to be considered, namely speed and status attainment. And speed attainment status is supported by the quality of human resources is high. Speed affects the achievement of the human resource development process which is based on three basic indicators. HDI is calculated based on the geometric mean health index, the index of knowledge, and the index of expenditure (Central Bureau of Statistics, 2017).

2. Research Method

2.1. Object Research

This study was conducted throughout the Regency / City of East Java Province during the time period from 2014 until 2017. The type and source of the data used in this research are secondary data that document the existing data on CPMs, Department or related institutions and literature as well as data other data to support the completion of this study. So that the data is a panel, panel data is the combination of the type of cross-section data and time series are 38 districts/cities, and during the years 2014-2017.

2.2. Variables Research and Operational Definitions

This research uses the descriptive quantitative approach with a case study. So as to find out the relationship or the relationship of each of the variables that exist and to determine the condition of human development. It is expected that by using quantitative research results of this study could provide a piece of rational and concrete information from the results. This study uses the independent variable (dependent) and the dependent variable (independent). The dependent variable in this research is the human development index, while the independent variable is local government spending and income per capita.

2.3. Analysis tools

This study uses panel data, the incorporation of this type of cross section data and time series data. Here is a description of an analysis tool used:

- Normality Testing Data

1. Normality Test Data

Normality test aims to determine the distribution of the data in the variable by using the test data normality. In a decent normality test data used is data that has a normal distribution.

2. test Multicollinearity

Multicollinearity test is intended to determine whether the regression model found a correlation between independent variables. If the test found a correlation, then there is a problem multicollinearity. In good regression models there is no correlation between the independent variables.

3. test Heteroskedasticity

Heteroscedasticity test is intended to test the model does occur inequality regression model variance of the residuals of the observations to other observations. A good regression model is that homokedastisitas.

4. autocorrelation

Autocorrelation is the correlation (relationship) that occurred among members of a series of observations that are arranged in time series (time series). Autocorrelation test in a model aims to determine whether there is a correlation between bullies error at a certain period by mistake bully previous period.

• Multiple Linear Regression Analysis

The method used in this research is the analysis of panel data regression. So our model is mathematically written as follows:

$$Y_i = B_0 + B_1X_{1i} + B_2X_{2i} + \dots + B_kX_{ki} + \epsilon_i \text{ (Widarjono, 2013: 59-60)}$$

In an economic sense, the above explanation is a mathematical function that local government spending (X1), per capita income (X2) on the Human Development Index (HDI) (Y). district / city in East Java province.

Structural models of independent variables used in this study are:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \epsilon$$

Information:

Y = Human Development Index (HDI)

β_0 = constant

$\beta_{1,2,3}$ = parameter

X1 = Shopping Local Government

X_2 = Income Per Capita

ε = Standard Error

This analysis has the aim to determine how much influence the independent variables are: local government spending, per capita income of the dependent variable is the Human Development Index (HDI).

- Hypothesis testing

To examine the relationship between each of the variables (partial correlation), the test is done by using the t test statistic. While testing the overall influence of the independent variable (independent variable) on the dependent variable (dependent variable) will be tested using the F test statistic. Below is an explanation of the above analysis equipment as follows:

1. Test t

T test was used to test the significant level of each parameter of the measured variable (independent) on the dependent variable separately (partial), if acceptable statistic by comparing the (t) is calculated by (t) table.

2. Test F count

F arithmetic test was used to test the significant level of each parameter of the measured variable (independent) on the dependent variable separately (partial), if acceptable statistic by comparing the (F) is calculated by (F) table.

3. The coefficient of determination (R^2)

Used to see the influence of independent variables on the dependent variable. Formulation R^2 decision are:

- (a) If R^2 close to 0, then among the independent variables and the dependent variable was no linkage
- (b) If R^2 is close to 1, then between the independent variables and the dependent variable of relevance

Given management data manually is not possible to do, then all of these calculations will be analyzed using computer-assisted program Eviews 9 For Computer.

3. Results and Discussion

3.1. Results

3.1.1. Lagrange Multiplier Test

According to table 2 is the known value of Cross Section 216.8663 and the significant value was 0.000 ($p < 0.05$). So the alternative hypothesis H1 is accepted and the selected method is Random Effects (RE). If the first test leads to the model of the Common Effect (H0accepted) then continued using the Chow Test, so that the final results using a model of Common Effect. But if the outcome on LM Test. The test stating that the alternative hypothesis H1 is accepted or the selected model is Random Effect it will proceed with the Chow Test.

TABLE 2: LM Test.

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	216.8663	0.597139	217.4634
	(0.0000)	(0.4397)	(0.0000)

3.1.2. Chow test

According to the table3 that the value of the F statistic is 448.831207 and the significant value was 0.000 ($p < 0.05$). Thus it can be seen that the alternative hypothesis H1received and the selected model is Fixed Effect. If the second test leads to the model of the Common Effect (H0accepted) then continued use Hausman test, so that the final results using a model of Common Effect. But if the final outcome on the test Chow stated that the alternative hypothesis H1 is accepted or the selected model is Fixed Effect it will proceed with the Hausman test.

TABLE 3: Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	448.831207	(37,112)	0.0000
Cross-section Chi-square	760.879704	37	0.0000

Sumber: Data penelitian diolah (2018)

3.1.3. Hausman test

Based on the known value of 4 tables Chi-Square statistic is 4.810978 and the significant value is 0.090 ($p > 0.05$). So the alternative hypothesis H0 is accepted and the selected method is Random Effect. It can be concluded that based on the three testing LM Test,

Chow test, and Hausman test, then Random Effect is the best model for a regression model that can get in research.

TABLE 4: Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.810978	2	0.0902

3.1.4. Regression Results Panel

Based on the results of the panel regression can be explained that the joint constant coefficient (3.090) shows that without the influence of the Regional Government spending and the GDP per Capita then great HDI is 3.090. The regression coefficient of Local Government Expenditure by 1 unit will impact change HDI value of 0.008 units. Per Capita Income regression coefficient of 0.093 indicates that any value variable equal to 1 unit per capita income will impact change HDI value of 0.093 units.

3.2. Discussion

3.2.1. Effect of Local Government Expenditure on Human Development Index (HDI) Regency / City in East Java

Local Government Expenditure variables have a probability value of 0.0316 < 0.050, which means that capital spending significant effect on the HDI in East Java province. With a coefficient of 0.008, which means when the local government spending accreting variable value by 1 unit will impact change HDI value of 0.008 units. Spending on goods and services is the purchase of goods and services that are consumable to produce goods and services are marketed and not marketed. Examples purchase school books to facilitate education is an effort to improve the quality of education, books you've purchased and then distributed to school pupils as book lending library. This, of course, affects the human development index because students can better understand the lesson in the school with their free book from government facilities. So the old school expectancy and the average length of the school could be better.

The linkage between local government expenditures with the human development index (HDI) is very closely this can be seen through the policies made by the government to improve the quality of Human Resources (HR) is based on the idea that education is not just to prepare students to be able to be accepted in the world of work. However, more than that because education is one of the efforts of human development for the

nation as moral education in order to make the young generation who are honest, fair and exemplary. This is in accordance with the opinion of Wegner who argued that government has a role in regulating relationships that arise in society. In other words, the policy made by the government budget is based on problems that arise in the community. In IPM decent standard of living there is a component that describes the welfare of society. Local government spending by the economic function is necessary in order to improve living standards worthy of the fulfillment of the public facilities.

Based on the description above can be concluded that the variable local government spending categories direct positive and significant impact on the Human Development Index (HDI) in the regency/city in East Java province and receive H1yang declared Shopping Local Government has a significant influence on the Human Development Index (HDI).

3.2.2. Per Capita Income influence on the Human Development Index (HDI) Regency / City in East Java Province

Government expenditure variable region has a probability value of $0.0000 < 0.050$, which means that the per capita income of a significant effect on the HDI in East Java province. With a coefficient of 0.093, which means when the value variable equal to 1 unit per capita income will impact change HDI value of 0.093. Government expenditure variable region has a probability value of $0.0000 < 0.050$, which means that the per capita income of a significant effect on the HDI in East Java province. With a coefficient of 0.093, which means when the value variable equal to 1 unit per capita income will impact change HDI value of 0.093.

Gross Domestic Product is conceptually using three kinds of approaches, namely: production approach, expenditure approach, and the income approach. Examples of this approach are the production of agricultural production where crops could meet the food needs of the community that the health and economic dimensions can be met. This of course also affect community development index. While the examples of government consumption expenditure approach are where government spending to meet public needs in the form of goods or services in order to boost economic growth. This is certainly an impact on the human development index. The last example to the income approach is the payment of a company whose capital is owned by outsiders, but the company had been operating in the area, then naturally the company's profits will be partly owned by outsiders which are owned by people who have the capital earlier. Conversely, if there are inhabitants of this area were added outside the region invest in

some of their profits will flow into the area, and into the income of the owners of capital. It can be concluded in this study that the per capita income variable has a significant effect on the Human Development Index in the regency/city in East Java province and receive the Per Capita Income H2 stating significant effect on the Human Development Index (HDI). Conversely, if there are inhabitants of this area were added outside the region invest in some of their profits will flow into the area, and into the income of the owners of capital. It can be concluded in this study that the per capita income variable has a significant effect on the Human Development Index in the regency/city in East Java province and receive the Per Capita Income H2 stating significant effect on the Human Development Index (HDI). Conversely, if there are inhabitants of this area were added outside the region invest in some of their profits will flow into the area, and into the income of the owners of capital. It can be concluded in this study that the per capita income variable has a significant effect on the Human Development Index in the regency/city in East Java province and receive the Per Capita Income H2 stating significant effect on the Human Development Index (HDI).

4. Conclusions

Local government spending has a significant influence and has a positive relationship with the Human Development Index (HDI) in the district/city in East Java province. Government spending is divided into three components, namely personnel expenditure, spending on goods and services, and capital expenditures. Based on the three components that most affect spending on goods and services. Examples purchase school books to facilitate education is an effort to improve the quality of education, books you've purchased and then distributed to school pupils as book lending library.

The GDP per capita income has a significant influence and has a positive relationship with the Human Development Index (HDI) districts/cities in East Java province. Gross Domestic Product Regional conceptually using three kinds of approaches, namely: production approach, expenditure approach, and the income approach. Examples of this approach are the production of industrial production processing where the results of the processing industry, such as fisheries and agriculture processing so as to meet the food needs of the community. It also affects the health and economic dimensions can be met. So that the human development index in eastern Java can be increased.

Suggestion

1. For the Government (stakeholders)

Government spending by the Regional Development Planning Agency (Bappeda) in the form of direct spending that is used to increase the ratio of the Human Development Index (HDI) should be targeted where such expenditure must be directly in contact with the public such as infrastructure and public facilities. Adequate infrastructure will increase the productivity of society, as well as the construction of public facilities is expected to help the community to meet their needs and can be used by all segments of society which in turn can increase the ratio of the Human Development Index (HDI).

2. For researchers Other

In local government spending is divided into two direct expenditure and indirect expenditure, but in this study only uses direct expenditure. Thus, in this study there are still shortcomings, it is hoped further research could add the variable indirect expenditures as a complement of the study.

References

- [1] The Central Statistics Agency (BPS). Publication of Gross Regional Domestic Product (GDP) per capita Regency / City in East Java 2013-2017. (Online), (<https://jatim.bps.go.id/publikasi.html>), accessed on 22 September 2018.
- [2] Badruddin, Rudy & Khasanah, Mufidhatul. Influence of Regional Income and Expenditure Against Human Development in Yogyakarta Province. (Online), (http://repository.upnyk.ac.id/4347/1/3.Apr_11__3_Rudy_format_1.pdf), accessed on October 14, 2018.
- [3] Harahap, Sofyan Syafri. 2011. Analysis of Crisis to Financial Statements. Jakarta: King Grafindo Persada
- [4] Sasana, Hadi. 2012. Effect of Local Government Expenditure and Revenue per capita Against Human Development Index. *Journal of Economics and management*. Vol.25, no.1. 2012: 1-12.
- [5] Sanggelorang, S., Rumat, V., & Siwu, H. (2015). Pengaruh Pengeluaran Pemerintah di Sektor Pendidikan dan Kesehatan terhadap Indeks Pembangunan Manusia di Sulawesi Utara. *Jurnal Berkala Ilmiah Efisiensi*, 15(3).

- [6] Suparyati, A. (2014). Pengaruh Economic Freedom dan Pendapatan Per Kapita terhadap Indeks Pembangunan Manusia. *Media Ekonomi*, 22(2), 171-182.
- [7] Zamharir Amir. 2016. Effect of the GDP Per Capita, Investment and Human Development Index Against Inter-regional Income Inequality In Yogyakarta Province Years 2011-2015. (Online), (<http://repository.unair.ac.id/53294/2/C%20190%2016.pdf>), accessed on October 15, 2018.