The Influence of Educational Sector and Government Spending on Healthcare, Household Consumption for Food and Poverty Levels on Human Development Index in Indonesia

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Abstract
The purpose of these papers is to find out if government spending sectors of education and health sectors, household consumption for food and poverty levels against the human development index in Indonesia. The type of data used in this research is time series data from 2009 until 2013 obtained from the Central Bureau of Statistics Indonesia. Hypothesis testing of the value of F-count is 426.419 with a significant level of 0.002. While F table at 95% confidence level (α = 0.05) is 19.25. Since both calculations are F-count> F- table and its significance level 0.002 <0.05 indicates that the independent variables are Government Education Expenditure (X1), Government Health Expenditure (X2), Household Consumption for Food (X3), and Poverty Rate (X4) , simultaneously is a significant influence on the dependent variable that is HDI (Y) year 2010-2016. The results of this research is government spending on healthcare and education sectors, household consumption for food and poverty levels have an effect on the human development index in Indonesia.

Keywords: educational sector, government spending on healthcare, household consumption for food, poverty levels, the human development index.

Introduction
The human development index (HDI) was introduced by the United Nations Development Program (UNDP) in 1990 and is published regularly in the annual report HDR (Human Development Report). HDI be important indicators for measuring success in an effort to build quality of human life that can explain how people can access the development results in obtaining income, health, and education.

Human Development Index (HDI) is an indicator used to measure one of the important aspect related to the quality of results of economic development, is the degree of human development. HDI has three elements, namely health, education, achieved and standard of life or often called economics. So the third element is very important to determining the level of a country's ability to improve HDI. The third element do not stand alone, but rather a mutually influence each other. In addition it is also affected by other factors, such as the availability of job opportunities, which
in business is determined by growth of economy, infrastructure and Government policies. So HDI in an area will increase from three elements can be improved, the highest HDI signifies the success of economic development in the area. In other words, there is a positive correlation between the values of HDI with the degree of success of economic development (Tambunan, 2003).

Meylina Astri in her research entitled “The Influence Of Local Government Spending On Health And Education Sector Against The Human Development Index In Indonesia” the results of his research stated that there is an effect of government spending on the education sector and the health sector on the human development index. This means that education and health are the variable that affects the human development index.

In addition to education and health, there are factors that influence the human development index in Indonesia. That is household consumption and poverty. Peoples Purchasing power to consume a product closely related to HDI because purchasing power is one of the composite indicator in HDI that is income indicator (Todaro, 2006). And poverty can make a serious enough effects for human development because the problem of poverty is a complex problem which actually stems from the ability of peoples purchasing power of that is unable to meet basic needs so that needs such as education and health are neglected.

Table 1.1 explains how the level of HDI, government spending on education and health sectors, household consumption for food and the poverty level in Indonesia.

<table>
<thead>
<tr>
<th>Years</th>
<th>HDI</th>
<th>government spending on education (million)</th>
<th>government spending on health sectors (million)</th>
<th>household consumption for food</th>
<th>Poverty levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>66.53</td>
<td>84.086</td>
<td>18.002</td>
<td>23.28</td>
<td>13.33</td>
</tr>
<tr>
<td>2011</td>
<td>67.09</td>
<td>91.483</td>
<td>13.649</td>
<td>22.38</td>
<td>12.49</td>
</tr>
<tr>
<td>2012</td>
<td>67.70</td>
<td>105.208</td>
<td>15.182</td>
<td>21.89</td>
<td>11.96</td>
</tr>
<tr>
<td>2013</td>
<td>68.31</td>
<td>114.969</td>
<td>17.577</td>
<td>21.62</td>
<td>11.37</td>
</tr>
<tr>
<td>2014</td>
<td>68.90</td>
<td>122.697,0</td>
<td>10.893,4</td>
<td>21.64</td>
<td>11.11</td>
</tr>
<tr>
<td>2015</td>
<td>69.55</td>
<td>143.638,7</td>
<td>23.225,7</td>
<td>21.69</td>
<td>11.18</td>
</tr>
<tr>
<td>2016</td>
<td>70.18</td>
<td>143.262,1</td>
<td>66.069,8</td>
<td>21.89</td>
<td>10.78</td>
</tr>
</tbody>
</table>

Source of the BPS Indonesia

From the table above, we can analyze how of the index human development indexes in Indonesia in the last seven years, namely from the year 2010 to the year 2016 the human development index (HDI) in Indonesia continues to increase. This shows that the human anality people in Indonesia are getting better. Increased human development indices cannot be separated from government spending on education and health sectors as well as household consumption as well as the poverty levels.

Human capital is one of the important factors in economic development. With quality human capital, economic performance is also believed to be better, according to Mubyarto said (2004). According to Todaro (2000), human resource of a nation is the most determining factor of character and speed of social and economic development of the nation concerned.

The tendency of households to spend their net income on goods that have direct contribution in human development, such as food, water, education and health are
highly dependent a number of factors such as poverty of levels and income distribution between households. It is generally known that most of the income portion of the poor is spent on consumption compared with to the rich. Therefore, it can be said that human development is not only determined by the level of poverty and income distribution alone it is also the Governments role in its expenditure policy.

The allocation of resources to human development from the Government side is a function of three things, namely the total expenditure of the Government sector, how much was allocated to human development sector, and how the budget is allocated to the social sector. In other words, the effect of human development on economic growth will be more convincing if there is indeed more habits to support good education, high level of investment, more equitable distribution of income, support for better capital social, and adequate economic policy.

**Literature Review**

**Economic Development Theory**

Economic development is a field of study in economics which is learns about the economic problems in developing countries, which we will then call only developing countries, and the policies that need to be done to realize economic development.

**The Human Development Index**

The human development approach developed by the agencies of the United Nations (UN) for development programs namely the United Nation Development Program (UNDP, 2008). The human development index is the underlying concept of development to achieve human welfare as the ultimate goal of development. An attempt to prosper in the community human development includes three basic components, namely live odds (health), knowledge (education), worth living (income). The human resources development process adalahsuatu process requiring long term interactions from all sectors will happen with phased (BPS, 2008).

**Government Expenditures**

Government spending is one component of wisdom fiscal policies aimed primarily at achieving stable economic stability while maintaining economic growth. When viewed from the development of government activities from year to year, it is seen that the role the government has always increased almost in all areas of the economy. (HDI) can be realized through the realization of state expenditure in public services. Based on Law no. 32 of 2004 on Local Governance, regional spending is prioritized to protect and improve the quality of community life in an effort to fulfill the local obligations realized in the form of improving basic services, education, provision of facilities health services, social facilities and decent public facilities as well develop social security by considering standard analysis shopping, price standards, performance benchmarks and minimum service standards established in accordance with the laws and regulations (Kuncoro, 2013).

**Research Method**

In this study, researchers use quantitative data, in accordance with its name, many are required to use the numbers, ranging from data collection, interpretation of the data, as well as the appearance of the result is (Arikunto, 2002:10). This research uses a variable that is composed as follows:

1. The dependent Variables: HDI
2. Independent Variables: government spending on education, government expenditure on health, Household Consumption for food, and the poverty rate.

In this study data collected using secondary data where data are secondary data obtained from the other party (already available) data obtained in the form of so
and has been processed by other parties, which are usually in the form of publications. The data type used is the time series (runtun time) from 2010-2016. Source data obtained from the Central Bureau of statistics (BPS). Such data include the following:
1. HDI
2. Government spending on education,
3. Government expenditure on health,
4. Household Consumption for food, and
5. The poverty rate.

Results and Discussion

Simple Regression Analysis

Simple regression is based on a functional or causal relationship of one independent variable with a single dependent variable (Sugiyono, 2011:261). Based on the processing of data with the help of the program SPSS Statistics 17.0 simple regression results are obtained as follows:

Table 2. The results of Multiple Linear Regression.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>62.496</td>
<td>2.967</td>
</tr>
<tr>
<td>Government Spending of Education</td>
<td>3.20E-005</td>
<td>.00</td>
</tr>
<tr>
<td>Government Spending of Health</td>
<td>3.38E-006</td>
<td>.00</td>
</tr>
<tr>
<td>Household Consumption for Food</td>
<td>.589</td>
<td>.235</td>
</tr>
<tr>
<td>Poverty Level</td>
<td>-.930</td>
<td>.223</td>
</tr>
</tbody>
</table>

The data processing results in a simple linear regression model are as follows:

\[ Y = 62.496 + 0.005X_1 + 0.006X_2 - 0.930X_3 + e \]

Description:
Y : HDI
a : Constant
b : Regression Coefficients
X1 : government spending on education,
X2 : government expenditure on health,
X3 : Household Consumption for food, and
X4 : the poverty rate

\textbf{F-Test}

According to Ghozali (2011; 98) test statistic F basically indicated whether all non-independent or variable are included in the model have the same influence together-dependent variables against/bound. The results of the calculation of the test F in this research are:
Table 3. The Result of F test

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.398</td>
<td>4</td>
<td>2.600</td>
<td>426.419</td>
<td>.002a</td>
</tr>
<tr>
<td>Residual</td>
<td>.012</td>
<td>2</td>
<td>.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10.410</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Poverty Level, Government Spending of Health, Government Spending of Education, Household Consumption for Food
b. Dependent Variable: HDI

The table above shows that the value of $F_{test}$ is 426.419 with a significant level 0.002. While $F_{table}$ at the level of trust 95% ($\alpha = 0.05$) is 19.25. Therefore both calculations i.e. $F_{test} > F_{table}$ and the level of their significance 0.002<0.05 show that independent variables namely government spending on education ($X_1$), government expenditure on health ($X_2$), Household Consumption for food ($X_3$), and the poverty rate ($X_4$), simultaneously is a significant effect on the dependent variable i.e. HDI ($Y$) in 2010-2016.

**Determination Test**

The results of the calculation of the determination test in this research are:

Table 4. The calculation of the Determination Test.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.999a</td>
<td>.999</td>
<td>.996</td>
<td>.07808</td>
<td>.999</td>
<td>426.419</td>
<td>4</td>
<td>2</td>
<td>.002</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Poverty Level, Government Spending of Health, Government Spending of Education, Household Consumption for Food
b. Dependent Variable: HDI

Based on the above table 3 it can be seen that:

1. $R = 0.999$, means the relationship between the variables government education spending ($X_1$), health expenditure ($X_2$), Household Consumption to eat ($X_3$), and poverty rate ($X_4$) against the HDI variables to eat ($Y$) is 99.9%. It means to do perfectly.
2. Adjusted $R^2 = 0.999$, means 99.9% HDI ($Y$) can explained by the government education spending ($X_1$), Government health expenditure ($X_2$), Household Consumption to eat ($X_3$), and poverty level ($X_4$). While the remaining 0.1% can be explained by other variables – variables not examined by this study.

**Conclusions**

Based on the results of the analysis it can be concluded that government spending on education ($X_1$), government expenditure on health ($X_2$), Household Consumption for food ($X_3$), and the poverty level ($X_4$), simultaneously is a significant effect on the dependent variable i.e. HDI ($Y$) in 2010-2016. Based on the results of the analysis it can be concluded that:
1. The Government should still be pursuing a high economic growth rate and should also focus more in favour of the construction in the field of man to improve the welfare of the community, particularly in areas that are still lags to reducing economic inequality.

2. The Government is advised to keep improving the human development index through poverty reduction throughout Indonesia for the period of next year so that the poor declined in number than in previous years.

3. In an effort to increase human development index, need policy budgeting with enlarge the composition of the budget of the country especially in indirect spending so that more focused on program and human development goals. The program targets referred to is in the areas of human development such as the improvement of public health, education, and job creation to be able to increase the people's income.

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References