DO EXPENDITURES OF EDUCATION, HEALTH, AND INFRASTRUCTURE IMPROVE HUMAN RESOURCES QUALITY?

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Abstract: *One indicator of national development successful is the increasing of human resources quality indicated by Human Development Index. Human Development Index is an indicator that describes how the population of a region have the opportunity to access the results of a development as part of their right to earn income, health, and education. Thus, Human Development Index is affected by the amount of expenditure on education, health, and infrastructure which are allocated for each province. Through causal method, this study aimed to analyze the effect of expenditures on education, health, and infrastructure to the Human Development Index, especially to analyze the causes lack of Human Development Index in 5 provinces with the lowest index. Furthermore, proportion of three types of this expenditures will also be linked with overall expenditure. The analysis was performed on the province data in Indonesia for period 2013. As conclusions, education expenditure, health expenditure, and infrastructure expenditure that has been allocated by provincial governments in Indonesia doesn't give effect and can't bring on changing for Human Development Index (HDI) value. It is caused of the allocation of education expenditure and health expenditure which are relatively small compared to the total expenditure, as well as the allocation of infrastructure expenditure which is also relatively small compared to Gross Domestic Product (GDP), so that the using of education, health, and infrastructure expenditure has not been optimal.*

Keywords: *Education Expenditure, Health Expenditure, Infrastructure Expenditure, Human Development Index.*

INTRODUCTION

Development is basically aimed for creating a prosperous people in country. Besides prosperous in economic terms, another important of public welfare indicator aimed to improve the quality of human resources. The quality of human resources can be measured by the Human Development Index (HDI). According Budiriyanto (2011), the HDI is a measure for the impact of the performance development in regions, because it shows the quality of the population in regions, which terms life expectancy, education, and decent living standards. In development planning,

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HDI also serves to provide guidance for determining priority in formulating policies and determining development programs.

Development programs are targeted to be realized in government expenditure. If it is associated with HDI, there are three indexes that compose the HDI, namely:

a. Education index, as the embodiment of the knowledge dimensions. This index is related to education expenditure.

b. Life expectancy index, as the embodiment of longevity and healthy dimension. This index is associated with health expenditure.

c. Decent living standards index, as the living embodiment of the decent living dimensions. This index is associated with infrastructure expenditure.

HDI in areas of eastern Indonesia itself is still on bottom position among of 33 provinces in Indonesia. Though, the magnitude of the HDI becomes one of determining the magnitude of the General Allocation Fund (DAU) received an area.

Many studies have been done on the relationship between education expenditure, health expenditure, and infrastructure expenditure with HDI. Lubis (2013) found that public expenditure on education, health, and infrastructure give positive effect on HDI. Amalia and Purbadharmaja (2013) also found that the harmony of the expenditure allocation, particularly the composition of public services expenditure allocations, such as health and education expenditure, has positive influence on HDI for regions / cities in Bali Province during 2008-2012. Similarly, research of Mauriza, et al (2013) found that government expenditure in health and education sector give positive effect on the HDI, in the Western and Eastern Region of the Province.

However, previous studies also showed that many areas in Indonesia hasn't noticed the amount of public expenditure on education, health, and infrastructure, in relation to the HDI increase, so that public expenditure doesn't bring a change in the HDI value. Maryani (2010) found that education and health expenditure only give a small effect on the HDI. While Badruddin and Khasanah (2011) actually find shopping education, health, and infrastructure do not affect the HDI, either with a time lag of 2 or 3 years. In addition, Brata (2005) found that in order to improve the quality of human resources and reduce poverty, hence the allocation of development expenditure for education and health need to be balanced with expenditure on other areas such as economic infrastructure. Other research in West Java also found that the structure of budget allocations have not even fully describe the development of human qualities. This is directly related to the availability of support facilities for HDI improvement that is still lacking. For that reason, further research must be done on the effect of education expenditure, health expenditure, and infrastructure expenditure on the Human Development Index (HDI).

LITERATURE REVIEW

Building Priorities in the Budget Revenue and Expenditure (APBD) and Building Performance

United Nation stated that 'development is not a static concept, It is continuously changing'. Development can be a process that is moving forward depends on the human and social structure (Tjokroamidjojo dan Mustopadidjaja, 1984;1). Development can also be interpreted as the entire process of changes made through the efforts of a conscious and planned (Badrudin, 2009). According to Swasono (2007), national development aimed at achieving the national goal of building human (people, nation and the State of), so that national development is for people, not vice versa.

Social development, economy, culture and politics that extends to the area as part of the development process. Indonesia started the construction changes with the presence Act (Act) 22 of 1999 on Regional Government and Law No. 25 of 1999 on Financial Balance between the Central Government and Local Government. Both, along with a set of regulations that favor, giving broad authority and responsibility to manage the financial resources available. The local government has the discretion to determine its own future based on its needs and abilities. Regional autonomy is expected to accelerate the development process and the equitable distribution of its results in the area (Wasistiono, 2003:33).

Performance indicator of a development that is commonly used by international institutions, are Gross Domestic Product (GDP), the structure of the economy, urbanization, the amount of savings, quality of life index (IKH) and the Human Development Index (HDI). HDI is based on the assumption that improving the quality of human resources will be followed by the opening of a wide range of options and opportunities determine the course of human life freely. This is in line with statements from Swasono (2009) mentioned above and Wasistiono (2003; 33-34) that qualified human resources will turn weaknesses into strengths and challenges into opportunities.

Development implemented by the Government should be guided by the vision and mission of national development. It is stated in the National Medium Term Development Plan (RPJMN). Based on RPJMN, every year the Government prepares national development themes that would inspiring every implementation of national development priorities have been determined. They will be outlined in the Government Work Plan (RKP). For local government, RPJMN, theme development and development priorities inspiring the Medium Term Development Plan (RPJMD) and Local Government Work Plan (RKPD).

Development in the field of education, health and infrastructure are part of 11 national development priorities in 2011-2014. Another priority is reform of

the bureaucracy and governance, poverty reduction, food security, investment climate and business climate, energy, environment and disaster management, underdeveloped areas, leading - outer and post- conflict, as well as culture - creativity and technological innovation. Overall this priority is reflected in the Work Plan and Budget (RKA), the National Budget (APBN), as well as the Regional Budget (APBD) as a planning and budgeting documents, as seen in the scheme of budgeting follows:

Figure 1: Government Budget Scheme
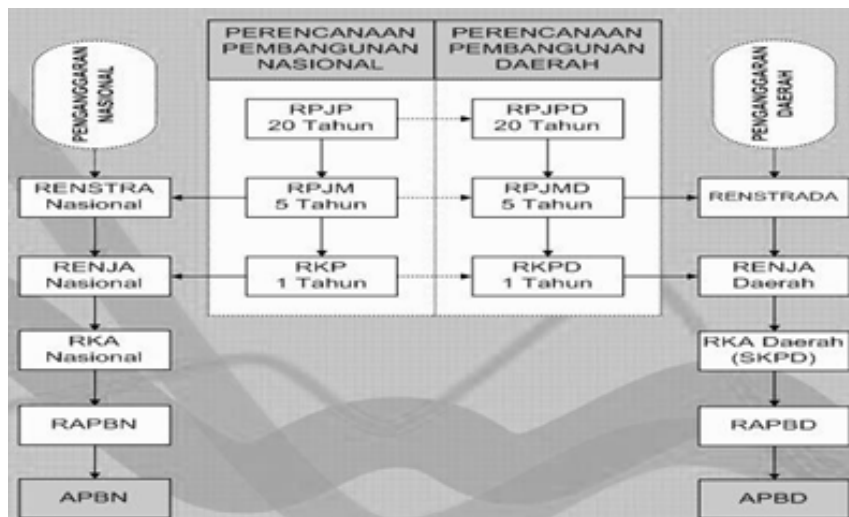
Source: Mahsun, et.al., 2011:50

Correlation Between HDI and Government Expenditures On Education, Health and Infrastructure

Local government performance in providing excellent service covering aspects of (i) inputs, (ii) output, (iii) process, (iv) outcomes, (v) benefit and (vi) impact. The six aspects are recorded in 2.2.1. RKA-SKPD, which contains details of programs and activities. These aspects can be used to measure the performance of each SKPD according to programs and activities. The expected impact of the programs and activities in these areas was to improve the quality of human resources in subsequent years.

According to Winarti (2014), the government spending on education variable has negative and not significance influence. This happens because 20% of government spending is not only allocated to education but also allocated for other expenses such as employee salaries and other education expenses. Mirza (2012) found that HDI at

Central Java Province increased driven by increased capital expenditure. Meanwhile, Badrudin and Khasanah (2011) found that no significant effect on education, health and infrastructure for HDI in Yogyakarta province using timelag 2 and 3 years. Indrawati et.al (2010) indicates that government investment in particular types of roads, irrigation and telecommunications / network have a positive relationship to the level of 5 % to economic growth in the region of Eastern Indonesia.

Based on the description in the previous paragraph, it can be a hypothesized that government expenditures on education, health and infrastructure affect the Human Development Index.

RESEARCH METHOD

Based on the research problem, this study use associative causal method. The population in this study is the Provincials Government in Indonesia. Data source are from the website of Directorate General of Fiscal Balance (DJPK) and website of Central Bureau of Statistics. Thus, the data collected through documentation. Data collected are data of Human Development Index (HDI) for Provincial Government in Indonesia for period 2013, analyzed with expenditures from Budget Realization Report By Affairs for period 2012. However, there are some local governments which hasn't yet published Budget Realization Report By affairs. Through data searching, researcher obtained only 26 local governments that have data completelly.

This study uses a quantitative approach with multiple linear regression analysis. As for the relationship between variables in this study was formulated as follows:

$Y = a + b1 + b2\ X1\ X2\ X3 + e + b3$

where: Y = Human Development Index (HDI)

a = constant

X1 = Education Expenditure

X2 = Health Expenditure

X3 = Infrastructure Expenditure

e = error

Before performing multiple linear regression analysis, firstly researcher performed classical assumption test. There are 4 test within, there are normality test, multicollinearity test, and heteroscedasticity test.

Normality test is a test that is intended to determine whether the data is normal or not. Testing was conducted using the Kolmogorov-Smirnov score. If the

significance of unstandardized residual Kolmogorov-Smirnov value greater than 5% (0.05), then the data is considered normal.

Meanwhile, multicolinierity test is intended to determine whether there is a strong correlation between independent variables. The existence of multicollinearity can be detected by VIF or tolerance values that appear in the regression equation. If VIF value less than 10 or tolerance value less then 1, there are no multicollinearity.

Final test of classic assumption test is heteroscedasticity test. Heteroscedasticity means the presence of variants in models that are not the same (constant). The cause of heteroscedasticity is the variable that is used to predict values very diverse, so its resulting residual values which are not constant. This test is done with Glejser test with criteria, if t significance value from correlation between independent variables and absolute residuals are not significant (more than 0.05/5%), there are no heteroscedastisity on the regression model.

Meanwhile, hypothesis test is done with a simultaneous test (F test) and partial test (t test). For simultaneous test, if the significance of F value less than 0.05 (5%), Ha is received, and conversely, if significance of F value more than 0.05 (5%), Ha is rejected. Similarly to the partial test (t test), Ha accepted if t significance value is less than 0.05 (5%), and Ha rejected if the significance value of t more than 0.05 (5%).

RESULTS

The test starts with the classical assumption test. Here are the results of test:

a. Normality Test

Based on the results of Kolmogorov-Smirnov test, the results are as follows:

Table 1
Normality Test Results

		Unstandardized Residual
N		26
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	2,75791666
Most Extreme Differences	Absolute	,132
	Positive	,086
	Negative	-,132
Kolmogorov-Smirnov Z		,672
Asymp. Sig. (2-tailed)		,757

Source: Secondary Data Processed

Asymp.Sig value is 0.757 (more than 0.05/5%), so it can be concluded that research model have normal distribution.

b. Multicollinearity Test

Through VIF and tolerance test, researcher obtained the following results:

Table 2
Multicollinearity Test Results

Variable	*Tolerance*	*VIF*
Belanja Pendidikan	,150	6,671
Belanja Kesehatan	,309	3,235
Belanja Infrastruktur	,119	8,399

Source: Secondary Data Processed

Tolerance value are less than 1, and VIF value are less than 10. So, it can be concluded that there are no multicollinearity on regression model.

c. Heteroscedastisity Test

The following test results heteroscedastisity with Glejser Test:

Table 3
Heteroscedastisity Test

	Model	*t*	*Sig.*
1.	(Constant)	4,803	,000
	Belanja_Pendidikan	-,263	,795
	Belanja_Kesehatan	-,477	,638
	Belanja_Infrastruktur	,017	,987

Source: Secondary Data Processed

Based on table 4, the value of all the independent variables (Sig.) has been above 0.05 (5%), so it can be concluded that this model has been cleared from heteroscedastisity. Furthermore, the test continued with hypothesis test. The following test results:

Table 4
Partial Test Results (t test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	72,837	,893		81,560	,000
Belanja_Pendidikan	-6,510E-008	,000	-,040	-,079	,938
Belanja_Kesehatan	-1,021E-006	,000	-,222	-,636	,531
Belanja_Infrastruktur	1,314E-006	,000	,616	1,096	,285

Source: Secondary Data Processed

From the test results, it was found that t significance value for education expenditure, health expenditure, and infrastructure expenditure are 0.938; 0,531; and 0.285; or above 0.05 (5%), so it can be concluded that the three types of expenditure does not affect the Human Development Index (Ha rejected). Similarly, as simultaneously, the F significance value is 0.236; or above 0.05 (5%). Thus, education expenditure, health expenditure, and infrastructure expenditure doesn't give effect simultaneously on the Human Development Index (Ha rejected). The following test results:

Table 5
Simultaneous Test Results (F Test)

| Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	39,584	3	13,195	1,527	,236[b]
Residual	190,153	22	8,643		
Total	229,736	25			

Source: Secondary Data Processed

INTERPRETATION

Through data tests, it can be concluded that education expenditure, health expenditure, and infrastructure expenditure does not affect Human Development Index (HDI). These results are consistent with Winarti (2014), Badruddin and Khasanah (2011), and Brata (2005). If it is compared with descriptive analysis through comparation with averaged of total expenditure, education expenditure

ranges from 5.74%, while expenditure on health ranges from 7.37%. But there are also several local governments in the eastern region of Indonesia that have education and health expenditure does not reach 2%. However, they have high enough portion for infrastructure expenditure, with the average reached 17.93%.

This condition is different from the local government in the western region of Indonesia (Sumatra, Java, and Borneo), as well as parts of eastern Indonesia (Sulawesi), which have education expenditure with average 5.88%; 9.79%; 5.53%; and 4.56%; while average of health expenditure from each regions are 7.11%; 8,32%; 8.21%; and 6.98%. However, especially for education expenditure, although the number is greater than expenditure on education in some parts of eastern Indonesia, but in terms of the regulations which obligates education expenditure maximum 20%, the average percentage of education expenditure allocated by provinces in Indonesia are still low. Therefore, education and health expenditures don't give effect on the HDI, because the allocation is still small, so the use of education and health expenditure has not been optimal. This findings appropriate with Winarti research (2014), who found that the government spending on education variable hasn't give significance influence, because 20% of government expenditure not only allocated for education, but also allocated for other expenses such as employee salaries and other education expenses. Allocation of education and health expenditure of total expenditure presented in chart 1.

Chart 1: Expenditure Allocation of Education and Health Expenditure Total Actual
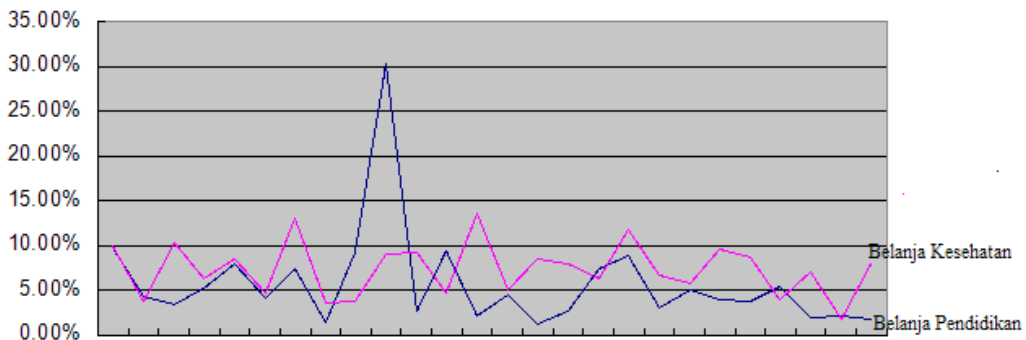
Source: Secondary Data Processed

From chart 1, it can be seen that the magnitude of health expenditure among all 26 provinces are relatively same. While on education expenditure, there are also provinces that allocates education budgets very high.

As for infrastructure expenditure, although the percentage is large enough (17.14%), but according Maryaningsih, et al (2014), seen from the total Gross

Domestic Product (GDP), expenditure allocation for this sector in the last 8 years on average only about 1,6% of GDP, relatively low from China and India that reached 5.3% and 7.3% of GDP. Whereas, the allocation of infrastructure expenditure is expected to bring an increase in the GDP, which resulted in an increase in the Living Standards Index (decent living). In addition, according Maryaningsih, et al (2014), until 2011, Indonesia still on ranks 37 from 59 countries with competitiveness weaknesses in basic infrastructure, technical infrastructure, scientific infrastructure, health,environment, and education. This weakness is partly because of funding and legal issues. Overall, this indicates that the system of planning, budgeting, and control of development has not been entirely directed at improving HDI.

This is also reflected from the document Work Plan Budget (RKA) and Performance Accountability Reports of Local Government (LAKIP) which has not yet formulated outcome on the final result as a result of the achievement of output. For example, for road construction activities, outputs to be achieved is the achievement of the construction of roads with certain numbers of km, while outcome is the increasing of road length in good condition. However, the expected outcome is not directed at quantitative measures as a result of the achievement of outputs, such as for achieving a certain percentage increase in GDP. Therefore, the budget figures should be linked with regional statistics to illustrate the effectiveness of the programs that have been implemented.

CONCLUSIONS AND SUGGESTIONS

Based on interpretation, it can be concluded that education expenditure, health expenditure, and infrastructure expenditure that has been allocated by provincial governments in Indonesia doesn't give effect and can't bring on changing for Human Development Index (HDI) value. It is caused of the allocation of education expenditure and health expenditure which are relatively small compared to the total expenditure, as well as the allocation of infrastructure expenditure which is also relatively small compared to Gross Domestic Product (GDP). Appropriate with Winarti (2014), the government expenditure on education hasn't give significance influence, because it isn't only allocated for education, but also allocated for other expenses such as employee salaries and other education expenses.

From conclusion, it is recommended for the provincials government in Indonesia to allocate education expenditure, health expenditure, and infrastructure expenditure with adequate portions. It is also recommended for central government to adjust the level of general allocation funds which are given to the provincials government with HDI, by providing a larger portion for the provincial government who still have a low HDI. In addition, it is recommended

that the budget for education and health sectors are allocated to post-budget items that support capital accumulation, both hard infrastructure and human capital directly (such as donations exemption of tuition fees and facilities), so that it can be enjoyed by people in order to improve education and health indices.

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