The Effect of Regional Revenue and Expenditures Toward Human Development Index of Central Sulawesi

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Abstract

The study aims to determine the effect of regional revenue and direct expenditure toward Human Development Index (HDI) of Central Sulawesi either simultaneously or partial. Model of analysis used in this study is multiple regression by using secondary data of time series from 2000-2010. The result of the analysis show variable X1 (province direct expenditure) with a coefficient of = 0.0021 (t.hit: 0.0549, variable X2 (Provincial Regional Revenue) with coefficient = 0.0009 (t.hit: 0.092, variable X3 (expenditure of district/city) with coefficients of = 0.0001 (t.hit: 0.061), variable X4 (Regional revenue of districts/cities) with a coefficient equal to: 0.0139 (t.hit: 1,476). Meanwhile constata coefficient values for variables X is 66.150. The results of t-test (partial) for all independent variables (X1, X2, X3 and X4) with level of belief of 0.95; with sig 0.05, and the t.tabel value of 2.276, then all independent variables (X) do not have significant influence toward Y variable (HDI of Central Sulawesi Province). The variable which has dominant influence of the four available independent variables is variable X4 (Regional Revenue of districts/cities). The result of f test (simultaneously X1, X2, X3 and X4)) showed significant results toward Y Variable (HDI of Central Sulawesi Province) with a coefficient f count = 27.31> F table 19.25 and R2 = 94.61 which shows the high influence of independent variables (X) toward Y variable (HDI).

Keywords: Human development; Prosperity; Quality of Life.

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1. Introduction

The indicator of community welfare in the development can be measured by using monetary and non-monetary approaches [1]. Monetary indicators measure welfare based on the approach to per capita income. Measuring the level of social welfare with non-monetary indicators refer to an index developed by the *United Nations for Development Program* (UNDP) is the Human Development Index (HDI). By using the Human Development Index indicator to find out the process of development in Central Sulawesi, it can be concluded that this region position is categorized still low compared to other regions in Indonesia. If considering the potential of Natural Resources in Central Sulawesi, it is deserved at a position among the top 15. HDI of Central Sulawesi until 2009 was ranked 22 with a value of 70.70.

One is owned by the local authority is the authority of the financial sector. The local governments can manage their own finances so there are opportunities to finance the implementation of household affairs effectively and efficiently by providing services and development in the public interest. Therefore, in line with the purpose of granting regional autonomy is to improve the welfare and service to the community, the development of democratic life, justice, equity, and the maintenance of harmonious relations between central and local government as well as between the regions. In this regard, the regional budget allocation strategy plays an important role to improve the Human Development Index [2]. In an effort to increase the contribution of Regional Revenue to the increase of HDI budget, the allocation of direct expenditures should be increased. Direct expenditure done by the government can be suggested to education, health and economic sectors, so the quality of human development can be better. Therefore, it is required the assessment of the budget that has been realized by the Government of Central Sulawesi Province through the regional revenue, especially in the sectors related to the constituent components of the HDI. The budget allocation used as primary component of HDI is the sectors of education, health and economic [3,4,5].

2. Materials and Method

In simple terms it can be seen in figure 1. This study is an assessment for causal relation in order to improve the empirical influence of revenue and direct expenditure toward HDI. This study is done by examining the research variables through the forming of models analysis through the statistical procedures then take interpretation as the basic of taking conclusion. This study also use secondary data in the form of "*time series*" quantitatively, ie the data in the form of numbers. Source of data obtained from the Central Statistics Agency of Central Sulawesi, Regional Development Planning Board and Finance Department of the Provincial Secretariat of Central Sulawesi. The data used is the realization of regional revenue and direct expenditure.

Descriptive analysis was done by using a ratio comparative analysis which relating to the research topic. The ratio analysis will include ration of regional revenue expenditure toward the population number from year to year, the ratio of direct spending to population, the ratio of the amount of revenue toward population and other matters relevant to the theme of the study [6]. Meanwhile the inferential statistical analysis method that will be used is the method of Multiple Linear Regression analysis [7, 8].
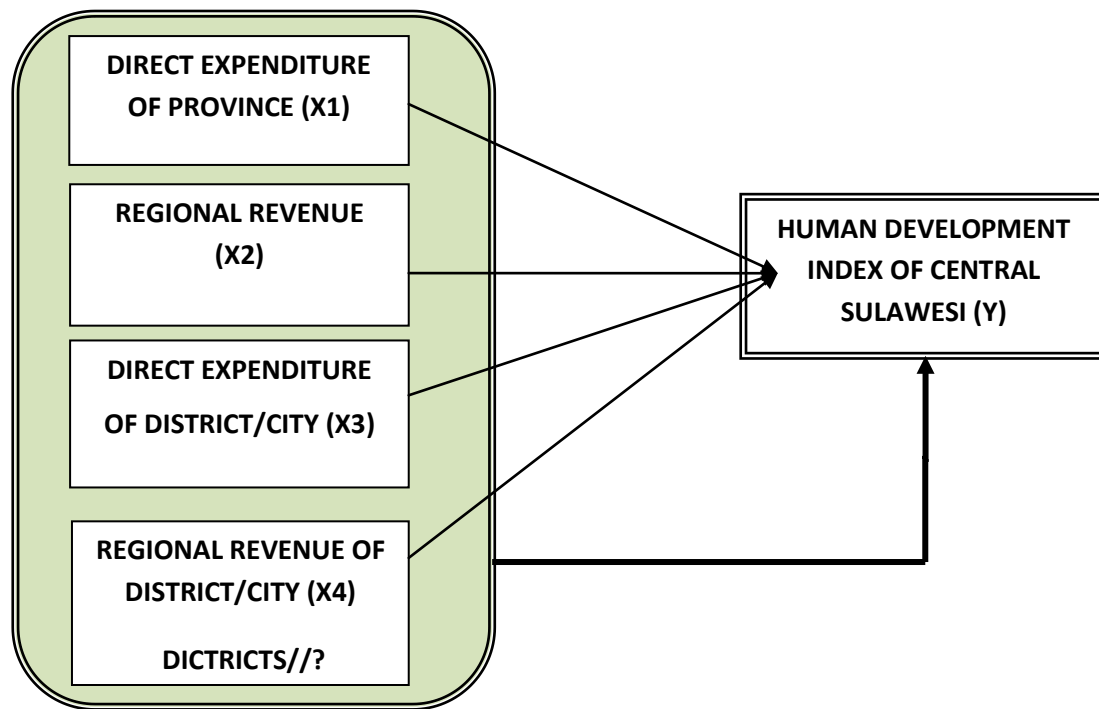
Figure 1: The Effect of Regional revenue and Direct Expenditure toward Human development (Index of Central Sulawesi).

3. Results and Discussion

In order to prove the hypothesis proposed in this study, *ordinary least square* (OLS) is done to make examination. OLS method is a quantitative analysis method to calculate the multiple regression coefficients of the closeness of the relationship between the dependent and independent variables either partially or simultaneously.

The variables used in the calculations consists of the direct expenditure of province, the direct expenditure of district/municipal, regional revenue of Province and regional revenue of district/city as independent variables and Human Development Index of Central Sulawesi as the dependent variable. All data is a time series starting in 2004-2010 years [3,4].

F test or ANOVA test is used to determine whether independent variables simultaneously or jointly has significance influence or not toward variable dependent.

Ho: $\beta1 = \beta2 = \beta3 = \beta4 = \beta5 = 0$, no significant effect between independent variables toward dependent variable simultaneously

Ha: $\beta1 = \beta2 = \beta3 = \beta4 = \beta5> 0$, There is a significant effect between the independent variables toward the dependent variable simultaneously

Criteria for hypothesis testing

Ho is accepted if the value of F count ≤ F table or sig values> 0.05

Ha acceptable if the value of F count> F table or sig value ≤ 0.05

Based on F test, it is founded result are shown in table 2.

Table 1: The result of regression analysis of variables of direct expenditures of Province, direct spending of district/municipal, regional revenue of Province and regional revenue of district/city toward the Central Sulawesi Human Development Index.

Model	Unstandardized Coefficients		Standardized Coefficients	t *count*	t *table*	Sig.
	B	Std. Error	Beta			
(Constant)	66,15	1,086		115,590		.000
Direct Expenditure of Province	0,0021	0,000	0,284	0,549	2,776	.638
Regional Revenue of Province	0,0009	0,000	0,048	0,092	2,776	.935
Direct Expenditure of District/Municipal	0,0001	0,000	0,069	0,202	2,776	.859
Regional Revenue of District/City	0,0139	0,000	0,608	1,4760	2,776	.278
Dependent Variable: HDI		F Statistic = 27,313 P= 0,036				
R Square =0,982023		DW = 1,910				
Adjusted R Square = 0,946069						

Tabel 2: The result of Regression Analysis which has Influence toward Direct Expenditure of Province, Regional Revenue of Province, Expenditure of District/City, Regional Revenue of District/City Simultaneously Toward HDI of Central Sulawesi

Model	Sum of Squares	Df	Mean Square	*F test*	*F tabel*	Sig.
Regression	10,53	4	2,63	27,31	19,25	0,04
Residual	0,19	2	0,10			
Total	10,72	6				

Based on the calculation of the regression in the table, multiple linear regression equation can be obtained which can be written as follows:

YHDI = 66,15 + 0,0021 X1 + 0,0009X2 + 0,0001X3 + 0,0139X4 + ε

In the model of studies could be seen the phenomenon of variables influence of direct expenditure of Province, Regional Revenue of Province, direct expenditure of District/City, Regional Revenue of District/City toward the HDI of Central Sulawesi. It could seen from F count (27, 31) is greater than F table (19.25).

The results of the regression equation indicated 66.15 Constanta. This means that if there is no treatment of variable of direct expenditure of province (X1), Regional Revenue of Province (X2), direct expenditure of District/City (X3) and Regional Revenue of District/City (X4), the HDI of Central Sulawesi Province is fix on the scale at 66, 15.

Direct expenditure of Province, Regional Revenue of Province has positive influence toward HDI of Central Sulawesi. Meanwhile, the variables of direct expenditure of District/City and Regional Revenue of District/City have positive correlation with HDI Province. The value of Independent variable coefficient of Direct Expenditure of Central Sulawesi Province (X1) is 0.0021 indicates an increase of 1% toward direct buying that will be causing the increased HDI as 0.0021 percent.

In order to maximize the direct expenditure of Province, it should be focused at the areas that have low HDI and directly related fields such as health and education. The value of Independent variable coefficient of Regional Revenue of Province (X2) of 0.0009 indicated that an increase of 1% in the Regional Revenue of Province that will lead to an increase in HDI of 0.0009 percent. This means that Regional Revenue of Province has positive correlation with the HDI of Central Sulawesi. Provincial revenue as a source of revenue not only oriented to the large number of income but how far can stimulate an increase in revenue especially in the district/city. This is expected to increase the purchasing power of community.

The coefficient value of independent variable of district expenditure of District/City (X3) of 0.0001 indicated that if there is an increase in direct spending of 1%, it will an increase in HDI at 0.0001 percent. Therefore, direct expenditure of District/City has positive correlation toward HDI but still weak. The amount and allocation system which was lack of proper to the sectors may causing the increasing of HDI was low. The analysis result showed that Regional Revenue of District/City has positive correlation toward HDI, the value of independent variable coefficient of Regional Revenue of District/City (X4) of 0,0139 indicated that revenue increased 1% would lead to an increase in the HDI of 0.9139 percent.

The coefficient of determination is used to test the *goodness-fit* goodness of-fit of the regression model that can be seen from the value of R Square. To determine the level of development of HDI in Central Sulawesi which is caused by several factors such as direct expenditure of Province (X1), Regional revenue of Province (X2), direct expenditure of District/City (X3), Regional revenue of District/City (X4) could be seen through the high determination coefficient with the calculation of Adjusted R Square is 0.946069. This means that the HDI of Central Sulawesi can be explained by the four independent variables above, meanwhile the remaining 3.4

percent is explained by other causes.

Based on calculations of SPSS version 17.0 it is obtained F count = 27.31 with a significance of F table of 0.04. By using the 0.05 level of significance then table value obtained F table is 19.25. Then F count (27,31,61) > F table (19.25), or the significance of F of 0.04 indicated less than 0.05. Thus Ha accepted and Ho not accepted, so the hypothesis stating that there is a simultaneous influence of direct expenditure of Province, Regional Revenue of Province, direct expenditure of District/City, and Regional Revenue of District/City toward HDI of Central Sulawesi Province accepted.

To examine whether the effect of each significant independent variables toward the dependent variable, the examination of each variables were done. The examination was done by looking the effect of the independent variable toward the dependent variable partially. The testing of the variables influence partially was done by using t test [9].

In the t test, the making conclusion was performed to find out the significance value of t-statistic are shown. If the significance value of a variable higher than $\alpha = 5\%$ (0.05), it can be concluded that the independent variables have significant toward the dependent variable or have any effect toward the dependent variable. Conversely, if the significance value of a variable is lower than $\alpha = 5\%$ (0.05), it can be concluded that the independent variables are not significant to the dependent variable.

Ho: $\beta = 0$ means there is no significant effect of independent variables toward the dependent variable.

Ho: $\beta \neq 0$ means no significant effect of the independent variable toward the dependent variable

Criteria for hypothesis testing

If t count < t table or sig $\geq$ 0.05, then Ho accepted and H1 rejected

If t count> t table or sig <0.05 then H1 is accepted and Ho rejected

The results of statistical calculations for Provincial regional revenue variable (X1), it is obtained value of t test of 0.549 with a significance of t is 0.538. At confidence level of 95% ($\alpha = 0.05$) with df 4, it is founded t table values at 2.776, then t count (0.0549) < t table (2.776) or sig (0.638)> α (0.05).

Based on these data indicated that the direct effect of Direct Provincial Expenditure (X1) toward HDI (Y) is not significant. Thus, Ho is accepted and Ha rejected.

The results of statistical calculations for variable of Province regional revenue (X2), obtained t value of 0.092 with t significance of 0.935. At the 95% confidence level ($\alpha = 0.05$) with df 5 obtained t value table is 2.776, then t count (0.92) < t table (2.776) or sig (0.935) > α (0.05). Based on these data indicated that the effect of regional revenue of District/City (X2) toward HDI (Y) is not significant. Thus, Ho accepted and Ha rejected.

The results of statistical calculations for variables of direct expenditure (X3), obtained t test of 0.069 with a

significance t of 0.859. At 95% confidence level ($\alpha = 0.05$) with df 4, t table values obtained at 2.776, then t count (0.069) < t table (2.776) or sig (0.859)> α (0.05). Based on these data indicated that the influence of direct expenditure of district/city (X3) toward HDI (Y) is not significant. Thus, Ho accepted and Ha rejected. The results of statistical calculations for variable of regional revenue of district/municipality, the value of t count 1,476 with the t significance of 0,278. At the 95% confidence level ($\alpha = 0.05$) with df 4, t table values obtained at 2.776, then t count (1.476) < t table (2.776) or sig (0.278) > α (0.05). Based on these data indicated that the effect of regional revenue of district/city (X4) toward HDI (Y) is not significant. Thus, Ho accepted and Ha rejected.

To determine the variables have most influence dominantly could be seen by the high t value. Based on the analysis result it could be concluded that the variable of regional revenue of district/city (X4) which have the most influence because it has the largest t value is equal to 1.476, then the province direct expenditure, and direct expenditure of district/city. Meanwhile, the variable which has smallest influence was province direct expenditure with t count equal to 0.092. The close correlation which occurs between the regional revenue of district/municipal and HDI due to increase of regional revenue of district/city which is a reflection of the economic progress of the community. The economic progress of society will indirectly improve public access toward health and education.

4. Conclusion

1. Life expectancy and purchasing power parity are causing the low HDI of Central Sulawesi so that making it difficult to move from rank number 22 and exceeds the national HDI;
2. The dynamics of improving HDI among the districts not occur dynamically
3. The result of F-test statistical analysis of the dependent variable of direct expenditure province, provincial regional revenue, direct expenditure of district/city and regional revenue of district/city simultaneously have a significant effect toward the Human Development Index of Central Sulawesi.
4. The results of the statistical analysis of the T test of dependent variables of direct expenditure province, provincial regional revenue, and direct expenditure of district/city and regional revenue of district/city partially no have significant effect toward the Human Development Index of Central Sulawesi.
5. The variables of provincial direct expenditure, provincial regional revenue, and direct expenditure of district/city and regional revenue of district/city have positive correlated with the Human Development Index.
6. The variables of regional revenue of district/city are the dependent variable which has the strongest correlation with the HDI of Central Sulawesi.

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