Analysis of The Effect of Regional Finance in Improving The Quality of Human Resources in West Sumatra

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Abstract

The quality of human resources or The Human Development Index (HDI) has a close relationship with government revenue. The higher the government revenue, the higher the human development index will be [1]. This study aims to: analyzethe effect of local revenue, general allocation funds, special allocation funds, and profit sharing funds on the human development index in districts/cities in West Sumatra. This type of research is descriptive and quantitative. The data used are secondary data from the Ministry of Finance's, Central Bureau of Statistics, others institution in 2010-2019. The method used is Panel Data Regression Analysis. The results of this study indicate that all variables have a positive and significant effect, except for the profit sharing fund which has a negative and significant effect on HDI.This indicates that the more funds spent on improving human resources, the quality of human resources will also increase, in accordance with previous research[2].

Keywords: HDI, regional finance, districts

INTRODUCTION

According to Law Number 23 of 2014 concerning Regional Government, the granting of the widest possible autonomy to regions is directed at accelerating the realization of community welfare through service improvement, empowerment, and community participation. Based on the principle of decentralization, the financing for the implementation of regional government development is carried out at the expense of the APBD. The government allocates funds to improve these services in the form of capital expenditure allocations which are later expected to improve the quality of life of the people[3]. One way to measure the quality of human life is through the Human Development Index (HDI). HDI is a composite index to regulate the achievement of the quality of human development to live a quality life, both in terms of health, education and economic aspects (Christy, et al. 2015). The level of the Human Development Index is influenced by several factors, namely Regional Original Income (PAD), General Allocation Funds (DAU), Special Allocation Funds (DAK), Revenue Sharing Funds (DBH) and other legitimate income. Regional Original Revenue (PAD) according to Law no. 33 of 2004 article 1, namely an input or income received by the region given by the center. Regional Original Income consists of regional tax revenues, regional levies, revenue from separated regional management, and other legitimate PAD. The amount of PAD can be used as a benchmark for how much independence a

region has in financing its regional development.

Human Development Index

The Central Bureau of Statistics published the Human Development Index Report stating that the concept of human development is measured using a three-dimensional approach to basic human beings, namely a long and healthy life, knowledge and a decent standard of living. To measure the dimensions of longevity and health, it is represented by an indicator of life expectancy at birth. The dimension of knowledge is represented by indicators of expected years of schooling and average length of schooling.

To increase the Human Development Index of an area, good health, education, and economy are needed. The improvement in regional revenues will contribute to improving the quality of community welfare as measured by the HDI. The more income generated by the region, making the region able to finance and meet the needs expected by the community [4]; .

Locally-generated revenue

According to Law Number 33 of 2004, Regional Original Revenue is an income obtained by the region from various sources in the area and is collected based on regional regulations in accordance with applicable laws and regulations. PAD is an important income for regional financing, therefore the ability to carry out the economy can be measured based on the amount of contribution made by PAD to the APBD, the greater the contribution of PAD to the APBD means the less dependence of the regional government on assistance from the central government. In Law Number 33 of 2004 Article 6, the sources of PAD consist of: local taxes, regional levies, separated regional wealth management results and other legitimate PAD.

Soekarwo stated that independence in the Regional Revenue and Expenditure Budget is closely related to the independence of Regional Original Revenue, because the greater the source of income comes from regional potential, not income from assistance, the regions will be more flexible to accommodate the interests of their people without the burden of the interests of the Central Government. that are not in accordance with the needs of the local community.[5]

General Allocation Fund

General Allocation Funds are funds originating from the APBN which are allocated with the aim of equitable distribution of financial capacity among regions to finance regional expenditure needs in the context of implementing decentralization. Halim (2014) DAU should be used to finance direct expenditures, namely expenditures related to services to the community that have an impact on community welfare in line with the demands of decentralization [6].

Special Allocation Fund

The relationship between central and regional financial balance, the Special Allocation Fund only has a function as a complement to other types of balancing funds. However, the role of the Special Allocation Fund is very important in regional development. Utilization and use of DAK is an important factor in order to increase regional development itself which will have an impact on national development. [7].

Profit Sharing Fund

Revenue Sharing Fund is one part of the balancing fund whose allocation is intended for local governments. The source of DBH is APBN revenue which is seen

from the potential of each region based on a percentage. DBH is used to finance regional needs in the context of implementing regional autonomy with the aim of reducing vertical fiscal disparities between levels of government by equalizing fiscal capacity between regional governments in order to spur regional spending in financing activities that have an impact on national development, achievement of public infrastructure, and spurring regional development. regional income.[7].

Other Legitimate Regional Income

According to Law No. 32 of 2004 Article 164 paragraph 1, other legitimate regional revenues are all regional revenues other than regional original revenues and balancing funds, which include grants, emergency funds, and other revenues determined by the government. Other legitimate regional revenues are used to finance regional expenditures. Where regional spending itself is used to improve people's welfare in order to achieve a better Human Development Index.

METHODOLOGY

Regression Model Selection Test

Before multiple panel data regression was performed, the method was tested using the Chow Test, Hausman test, and L-M test, and continue proceed with classical assumption tests such as normality, multicollinearity, and heteroscedasticity. The model of Panel Data is

$$IPMit = \beta_0 + \beta_1 PAD_{it} + \beta_2 DBH_{it} + \beta_3 DAU_{it} + \beta_4 DAK_{it} + \beta_5 LPS_{it} + \varepsilon_{it}$$

Where :

HDI	= Human Development Index (Y)
i	= Cross Section
t	= Time Series
β_0	= Constanta
1, 2, 3, 4, 5	= Regression Coefficient
PAD	= Regional Original Income (X1)
DAU	= General Allocation Fund (X2)
DAK	= Special Allocation Fund (X3)
DBH	= Profit Sharing Fund (X4)
IDIC	= Other Legitimate Regional Income (X5)
ε	= Error

RESULTS AND DISCUSSION

Regression Model Selection Test

1. **Chow test**

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistics	df	Prob.
Cross-section F	572.907434	(18,165)	0.0000
Cross-section Chi-square	784.543544	18	0.0000

Source: Results of Processing Eviews 9, 2021

Based on the results of the Chow test above, it is known that the Prob.Cross-section Chi-square value is 0.0000 < 0.05, then the Chow test chooses the fixed effect to be used as an analysis tool.

2. Hausman test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

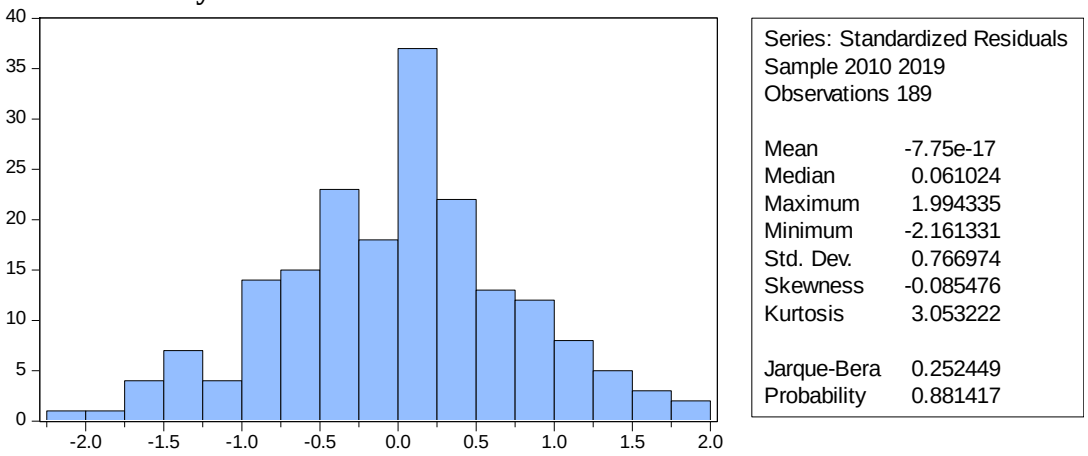
Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Cross-section random	61.448774	5	0.0000

Source: Results of Processing Eviews 9, 2021

Based on Table 4.3, the Prob. Cross Section Random value is 0.0000, so that when compared, the result is Prob. Cross Section Random < 0.005. Therefore, the conclusion of the Hausman test is that Fixed Effect is better than Random Effect.

Classic Assumption Test

1. Normality Test



Source: Results of Processing Eviews 9, 2021

From the results of the normality test obtained a probability value of 0.881417. The resulting probability value is > 0.05 so it can be concluded that the residuals are normally distributed.

2. Multicollinearity Test

	LPAD	LDAU	LDAK	LDBH	LLPS
LPAD	1	0.640367	0.608196	0.268517	0.549765
LDAU	0.640367	1	0.541050	0.301147	0.624460
LDAK	0.608196	0.541050	1	0.150418	0.605563
LDBH	0.268517	0.301147	0.150418	1	0.334005
LLPS	0.549765	0.624460	0.605563	0.334005	1

Source: Results of Processing Eviews 9, 2021

From the results of the multicollinearity test, the correlation coefficient value (r) LP is smaller than 0.80 (Correlation Coefficient < 0.80), so with this all the independent variables used in this study are free from multicollinearity.

3. Heteroscedasticity Test

Dependent Variable: LRES2
Method: Least Squares Panel
Date: 07/17/21 Time: 20:23
Sample: 2010 2019
Periods included: 10
Cross-sections included: 19
Total panel (unbalanced) observations: 189

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.240050	4.431324	0.956836	0.3400
LPAD	-0.113655	0.568827	-0.199807	0.8419
LDAU	-1.407183	0.784155	-1.794521	0.0746
LDAK	1.003635	0.395542	2.537365	0.0521
LDBH	-0.413595	0.550609	-0.751160	0.4536
LLPS	-0.116400	0.338686	-0.343680	0.7315

Source: Results of Processing Eviews 9, 2021

From the results of the park test, all variables have a significance value above 5% (0.05), where the probability value of LPAD (X1) is 0.8419, LDAU (X2) is 0.0746), LDAK (X3) is 0.0521, LDBH (X4) is 0.4536, and LLPS (X5) is 0.7315, so there is no heteroscedasticity problem.

Panel Data Regression Analysis

Variable	Regression equation LIPMit = 0 + 1LPADit + 2LDAUit + 3LDAKit + 4LDBHit + 5LLPSit + it					
	coefficient	t-stat	p-value	Adj-R2	Prob. F-Stat	DW
Constanta	4.056525	254.9243	0.0000	0.987293	0.0000	1.2089
PAD	0.009638	4.718507	0.0000			
DAU	0.008342	2.962488	0.0035			
DAK	0.016232	11.42784	0.0000			
DBH	-0.003814	-1928731	0.0555			
IDIC	0.009130	7.507028	0.0000			

Source: Eviews Processed Results, 2021

From the results of panel data regression using the Eviews 9 program, the following equation is obtained:

$$LIPMit = 0 + 1LPADit + 2LDAUit + 3LDAKit + 4LDBHit + 5LLPSit + it$$

$$LIPmit = 4.057 + 0.010LPADit + 0.008LDAUit + 0.016LDAKit - 0.004LDBHit + 0.009LLPSit + it$$

The meaning of these numbers is as follows:

a) A constant of 4.057 can be interpreted if the independent variables (Regional Original Income, General Allocation Funds, Special Allocation Funds, Revenue Sharing Funds, Other Legitimate Regional Income) are equal to zero, then the Human Development Index increases by 4.06 percent.
b) The regression coefficient for the Regional Original Income variable is 0.010, meaning that if the Regional Original Income increases by 10%, then the Human

Development Index (IPM) increases by 0.1 percent, assuming the other independent variables have a fixed value.

c) The regression coefficient for the General Allocation Fund variable is 0.008, meaning that if the General Allocation Fund increases by 10%, the Human Development Index (IPM) will increase by 0.08 percent, assuming the other independent variables have a fixed value.
d) The regression coefficient for the Special Allocation Fund variable is 0.016, meaning that if the Special Allocation Fund increases by 10%, the Human Development Index (IPM) will increase by 0.16 percent, assuming the other independent variables have a fixed value.
e) The regression coefficient for the Profit Sharing Variable is -0.004 meaning that if the Revenue Sharing Fund increases by 10%, then the Human Development Index (HDI) decreases by 0.04 percent, assuming the other independent variables have a fixed value.
f) The regression coefficient of the Other Legitimate Regional Income variable is 0.009 meaning that if the Other Legitimate Regional Income increases by 10%, the Human Development Index (IPM) increases by 0.04 percent, assuming the other independent variables have a fixed value.

Hypothesis test

1. Coefficient of Determination Test (R2)

From the results of the R2 test, the coefficient of determination obtained is 0.9887. This means that 98.87% of variations in the ups and downs of the Human Development Index are determined by Regional Original Income, General Allocation Funds, Special Allocation Funds, Revenue Sharing Funds, Other Legitimate Regional Income, the remaining 1.87% is influenced by other variables outside the model not examined. .

2. Simultaneous Significant Test (F Test)

From the results of the F test, the p-value (0.000) < 0.05 means that the variables of Regional Original Income, General Allocation Funds, Special Allocation Funds, Profit Sharing Funds, and Other Legislative Regional Revenues together have a significant effect on the Development Index.

3. Parameter Significant Test (t Test)

The partial significance test shows the following results:

a) The p-value of Regional Original Income (0.0000), this indicates that the p-value (0.0000) < alpha (0.05). Thus, the null hypothesis is rejected, which means that Regional Original Income (PAD) is positively related and has a significant effect on the Human Development Index (IPM). This means that if PAD increases, it will increase HDI.
b) The p-value of the General Allocation Fund (0.0035), this shows that the p-value (0.0035) < alpha (0.05). Thus the null hypothesis is rejected, which means that the General Allocation Fund (DAU) is positively related and has a significant effect on the Human Development Index (IPM). This means that if the DAU increases, it will increase the HDI.
c) The p-value of the Special Allocation Fund (0.0000), this indicates that the p-value (0.0000) < alpha (0.05). Thus, the null hypothesis is rejected, which means that the Special Allocation Fund (DAK) is positively related and has a significant effect on the Human Development Index (HDI). This means that if the DAK increases, it will increase the HDI.
d) The p-value of the Revenue Sharing Fund (0.0555), this shows that the p-value (0.0555) = alpha (0.05). Thus, the null hypothesis is rejected, which means that

the Revenue Sharing Fund (DBH) is negatively related and has a significant effect on the Human Development Index. This means that if DBH increases, it will reduce HDI.

e) The p-value of Other Legitimate Regional Income (0.0000), This indicates that the p-value (0.00000) < alpha (0.05). Thus, the null hypothesis is rejected, which means that other legitimate regional income is positively related and has a significant effect on the Human Development Index (HDI). This means that if other legitimate regional income increases, it will increase the HDI.

The Influence of Regional Original Income on the Human Development Index

Referring to the results of the study, it can be concluded that the Regional Original Income (PAD) variable has a positive and significant effect on HDI. PAD is one of the regional income groups that become a source of funds to finance regional expenditures originating from the potential of each region based on Law Number 28 of 2009 and followed up with Regional Regulations as the basis for collection. The amount of PAD obtained by the region can increase the ability of the region to finance activities in the APBD with the aim of increasing community welfare through programs and activities that directly touch the needs of the community in the fields of education, health and the community economy in the form of programs and activities as well as assistance to small and medium enterprises so that welfare society can grow faster. This research is in line with the opinion of [8,9] that Regional Original Income has an effect on the Human Development Index. The use of Regional Original Revenue by the government is mostly used for regional expenditures, both capital expenditures and routine regional government expenditures that can improve people's welfare.

The Effect of the General Allocation Fund on the Human Development Index

Referring to the results of the study, it can be concluded that the General Allocation Fund (DAU) variable has a positive and significant effect on HDI. The influence of the DAU on the human development index is due to the allocation being focused by local governments for human development. This is in accordance with the fact that based on the results of HDI measurements in West Sumatra, the life expectancy in 2017 in West Sumatra is 68.78 years, the expected length of schooling is 13.94 years, and the average length of schooling is 8.72 years. While the per capita expenditure per year by the population of West Sumatra is Rp. 10.036 million. "The HDI trend in West Sumatra continues to rise. Since 2010-2017, the HDI has grown on average 0.85 percent per year.This is in line with Lestari's research (2019) which states that the General Allocation Fund (DAU) has a positive and significant influence on the Human Development Index. This means that an increase in allocation funds can increase the human development index.

The Effect of the Special Allocation Fund on the Human Development Index

Referring to the results of the study, it can be concluded that the Special Allocation Fund (DAK) variable has a positive and significant effect on HDI. DAK is intended to help finance special activities in certain regions which are regional affairs and in accordance with national priorities, in particular to finance the needs of basic public service facilities and infrastructure that have not yet reached certain standards or to encourage the acceleration of regional development. DAK is fully used for capital expenditures to improve public facilities. The optimal use of DAK in the allocation of capital expenditures will be able to improve the quality of human development, both in

the fields of education, health, social and public services.This is in line with research which states that the Special Allocation Fund (DAK) has an effect on the Human Development Index (IPM)[10]. This is because the government is right in maximizing the DAK budget in special activities in accordance with national priorities that support education, health, and economic elements related to increasing HDI.

The Effect of Profit Sharing Funds on the Human Development Index

Referring to the results of the study, it can be concluded that the Profit Sharing Fund (DBH) variable has a negative and significant effect on the Human Development Index (IPM). Revenue Sharing Funds are funds sourced from APBN revenues which are allocated to regions based on certain percentage figures to fund regional needs in the context of implementing decentralization (Law-33,2004). A large DBH is expected to have an impact on development in the area concerned with HDI. Revenue Sharing Funds are block grants, such as the Special Allocation Fund and the General Allocation Fund, so that their management and use are under the authority of the regional government. Specifically for the Revenue Sharing Fund, there are several components whose use is determined by the state based on related regulations.A study on the effectiveness of using the Natural Resource Revenue Sharing Fund (DBH-SDA) by Saputra & Lumbantoruan (2016) found that the large contribution of the Natural Resources DBH to regional spending should open up opportunities for regional fiscal capacity to optimize poverty reduction programs. Several districts/cities already have poverty alleviation programs with large fiscal policies. However, most of the regional poverty reduction programs are still less than optimal in overcoming the poverty problem. Several problems that cause poverty problems such as: the problem of low education, poor health, poor infrastructure, difficult topography of the area, lack of public access to capital, physical limitations (disability), cultural factors, The solution is to include poverty alleviation as a priority sector of development in the RPJMD and to optimize poverty reduction programs in the regions such as establishing more adequate schools, health centers, and infrastructure in remote areas so that people can get a better education and adequate health. well, and with better infrastructure the community can live a better life so that it can improve the regional economy. Thus the Human Development Index can increase. The results of this study are in line with the research [11,12] stating that DBH has a negative and significant effect on HDI.

Other Influence of Legislative Regional Income on Human Development Index

Referring to the results of the study, it can be concluded that the other variables of legitimate regional income have a positive and significant effect on HDI. Other legitimate regional revenues are used to finance regional expenditures. Where regional spending itself is used to improve people's welfare in order to achieve a better Human Development Index. This result is in line with the research results of Sri Suwarni, 2009 which shows that other legitimate income has a significant positive effect on regional spending. Furthermore, supported [13.14] regional spending is used to protect and improve the quality of people's lives.

RESULTS

Regional Original Income. The general allocation funds, the special allocation fund, and others legitimate regional income are positive and significant on the Human Development Index at level of < (0.05). But profit sharing funds on Human

Development Index is negative significant that means if profit sharing funds increase it will be decrease of HDI. These results indicate that the importance of regional finance in improving the quality of human resources will improve the welfare of the community as a whole[15].

RECOMMENDATION

Local governments are expected to be able to manage Regional Original Income (PAD), General Allocation Funds (DAU), Special Allocation Funds (DAK), and Revenue Sharing Funds (DBH) and other legitimate regional revenues in the context of improving community welfare, especially in in the fields of health, education and the economy in order to increase the achievement of the Human Development Index (HDI).

Local governments are expected to be more able to explore and develop regional economic potentials and sectors that can increase Regional Original Income (PAD) so that local governments are more independent in funding all government activities and do not always depend on transfer funds from the central government.

It is hoped that local governments can include poverty reduction as a priority sector of development in the RPJMD and optimize poverty reduction programs in the regions.

For other researchers, they can develop this research by using other methods such as qualitative methods with interviews or direct observation, survey methods using questionnaires or experimental methods. The data used is primary data from the results of interviews, observations, or questionnaires. The results of this study can be used to consider aspects of the quality of the use of PAD, DAU, DAK, DBH and other legitimate local revenues in increasing HDI and to test the consistency of the results of this research.

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