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THE ANALYSIS OF HUMAN DEVELOPMENT INDEX IN WEST SUMATERA: CAN IT REPLACE GDP AS A WELFARE PROXY?"

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Abstract: *Human development is a process of enlarging the choices of people which means that the main point of development of a country is human. The definition of human development basically includes a vast dimension of development which not only emphasizes on economic growth but also its human quality. This research is aimed to analyze how big the effect of poverty level, expenditure per capita and government expenditure in education and health on Human Development Index (HDI) in West Sumatera. Using panel data analysis, the result of this study indicates that that poverty has a negative and significant effect on human development index. Expenditure per capita has a positive and significant effect on human development index. Government expenditure in education has a positive and significant effect on Human development index and the last government expenditure on health has a positive and bot significant on influencing human development index in West Sumatera at the year of 2010-2014.*

Keyword: *Human development index, poverty, expenditure per capita, government expenditure*

INTRODUCTION

The ultimate goal of all government policies to accelerate economic growth is to improve the welfare state. Economic growth is defined as a process of increasing the production capacity of an economy which is realized in the form of an increase in national income. If a country can maintain a high rate of economic growth, then the welfare of its people are also in a state of improvement. However, in the last few decades economists argue that economic growth can no longer be the only indicator to see the welfare of society. This opinion is supported by research conducted by Syarifudin (2013). Through his research, he found that there are deficiencies and problems with indicators of economic growth in providing an overview of the welfare of the people because these indicators are limited to economic factors alone, while the welfare of society is not only influenced by economic but also social indicators.

This is supported by the facts that occur in Indonesia. The poverty as an indicator to describe the welfare is always increasing every year. In 2016, BPS records that the number of poor people in West Sumatra on March was 371.555. Compared to September 2015 (349,529 people) rose by 22,026 people (BPS, 2016). By percentage, the poor rose by 0.38 percents from September 2015 to March 2016 from 6.71 percent to 7.09 percent. Meanwhile, from the data of economic growth in quarter IV-2017 to quarter IV-2016 (yoy) grew by 5.37 percents, rose 4,87% when compared to the previous year. From the data, we see that poverty that is an indicator to assess the welfare of the societiy cannot be explained just by looking at the data of economic growth alone because when economic growth in West Sumatra increased, poverty actually decreased.

Many countries such as Indonesia and other developing countries are achieving high economic growth targets each year and can maintain the growth rate, but fail to reduce the level of poverty as an indicator of the welfare state, and also many developed countries in the rest of the world have high levels of income and growth but fail to reduce the social problems in their own country, so it is believed that the the welfare of a country is not only marked by high economic growth but also its human quality (Wahid, 2012) .

Therefore the United Nations Development Program (UNDP) issued a measure of the welfare state through the Human Development Index (Human Development Index) which emphasizes on the development's processes to improve aspects of life both the impact on human physical conditions of health and welfare or non- physical that is intellectuality. Development indicators that affect the physical condition of the society are seen in life expectancy and purchasing power, while those that are non-physical are seen from the quality of education

In West Sumatra over the last few years, the human development index has been increasing every year. According to BPS in 2008, the value of HDI (human development index) in West Sumatra is 72.96 rose to 75.01 in 2013. While looking at the data of economic growth rate in 2008-2013 experienced a fluctuating situation that reached 6.8% in 2008 which is the highest value since 2000. The increase did not last long and suffered a considerable decrease in the following year that is 4.28% and had increased again in 2010 with 6.38% but decreased again in the year 2013 although not too far that is 6 , 18%.

In 2016, HDI in West Sumatra has reached 70.73 and increased by 0.75 points compared with the year 2015 of 69.98. By 2016, the human development index in West Sumatra is already "high" (70≤IPM <80), increasing from its status in 2015 with "moderate" status (60≤IPM <70). In 2017, HDI West Sumatra has reached 71.24, increased by 0.51 points compared to the year 2016 of 70.73. Besides that, from the data of poor people in West Sumatra quite fluctuate and tend to decrease. In 2008 the number of poor people in West Sumatra 473.3 million, decreased in the following year 426.1 million and increased again in 2010 reached 485.1 million people, until December 2014 the latest data shows the number of poor people in Sumatra West shows a decrease of 357.74 million people. But in 2016, the poor rose by 0.38 percent from September 2015 to March 2016 from 6.71 percent to 7.09 percent, and from the March 2016 the Poverty Line (GK) increased by 5.25 percent, from Rp 403,947 per capita per month to Rp 425,141 per capita per month in September 2015 (BPS, 2016).

If we associate with the human development index that is always increasing almost every year, we can state that the increasing quality of human development is not always accompanied by the decline of poverty in West Sumatra so that we will find a phenomenon that shows the existence of a mismatch between the theory and reality and it would be interesting to investigate. So from the data and explanation above, the author would like to examine about the “The Analysis of Human Development Index in West Sumatera: Can it replaces GDP as a welfare proxy?”

Hidayahwati, N (2011) conducted a research with the title of fiscal self-reliance analysis on human development index in East Java province. It found that the level of regional autonomy has a positive and significant effect on HDI in East Java.

The research was done by Nartgün et al. (2015) in Turkey. They found that Turkey do not satisfy with HDI index and it is also suggested that Turkey should invest more to education to have a better performance in human development index In India, the same study was done by Sonu Madan (2012) with the title Human Development and Poverty – a Perspective Across Indian States. The purpose of this study is to examine the transformation of development eforts into the well- being of the society in India, using the regression analysis he found that the negative relationship between the two underlines the need of raising economic and educational opportunities and their equitable distribution among all the sections of the society.

At the last, the same research was conducted by Sari (2011) which aims to determine the effect of government spending and GDP in influencing human development. Using the OLS analysis and making the human development index as a dependent variable, and per capita GDP with government spending on health and education as its independent variables, researchers found that government spending on health and education has a positive relationship but has no effect on the human development index West Sumatra

LITERATURE REVIEW

Conceptually, human development is an effort made to expand the chances of the population to achieve a decent living, which can generally be done through an increase in basic capacity and purchasing power. At the practical level, basic capacity building is an effort to increase the productivity of the population through the improvement of knowledge and health degree, so that economic growth, poverty, expenditure per capita and government expenditure are very appropriate to be an indicator affecting human development index, because as we know that human development index consists of three dimensions, education level, health and income per capita. The education and health level is strongly influenced by government spending in that field, while expenditure per capita, poverty and economic growth also strongly influenced by the high purchasing power of those societies.

According to UNDP (2004), human development is a process of enlarging the choices of people which means that the main point of development of a country or a region is human. The definition of human development basically includes a vast dimension of development which not only emphasizes economic growth but also its human quality. While, the human development index component consists of health index that are life expectancy and education index. Life expectancy shows the average approximate year that a person can travel during life. There are two types of data used to show life expectancy level, live birth (ALH) and surviving children (AMH). The basic data required are the average of live births and the average child is still alive from the first ever married woman. Besides life expectancy, the Education Index is also included, the educational index calculation includes two indicators, the adult literacy rate and the school average (mean years of schooling). The population used is usually the population aged 15 years and over and the last is purchasing power parity (PPP) to measure living standards of a society

Human Development index (HDI) rankings of all countries are divided into 3 groups, namely: (1). Countries with low human development, if the value of HDI ranges from 0.0 to 0.50; (2). countries with medium human development, if the value of HDI ranged from 0.51 to 0.79; (3). A countries with high human development if the value of HDI ranges from 0.80 to 100. Countries with HDI values below 0.51 to 0.79 can be said that the country began to pay attention to human development, while the country with a value of HDI 0.8 means that the country is very concerned about human development..

METHODS

This study uses secondary data, which combined time series and cross section data from 2010-2014 in the regencies / cities in West Sumatera Province. The focus of this research is on the number of poor people, expenditure per capita, government spending on education and health and its impact on the human development index in West Sumatra. The data obtained from the publication of BPS, UNDP, and other publications. To test the hypothesis used multiple linear regression model. Econometrically, it can be analyzed using the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu_i$$

Noted:
Y = Human Development Index (Percent)

X1 = Poverty (thousand inhabitants)

X2 = Spending per capita (Rupiah)

X3 = Government spending on education (Rupiah)

X4 = Government expenditure on health (Rupiah)

β0 = Constants

β1, β2, β3, β4 = Parameters to be estimated to obtain an overview of the effect of any independent or independent variable on dependent or dependent variables.

μi = Error term

The dependent variable is the Human Development Index (Y) which is the quantification of the aggregate measure of human quality, consist of life expectancy, literacy rate, average length of school and purchasing power parity (worth between 0 and 100) in all regencies /cities in West Sumatra in the period 2010-2014. While the first independent variable is the number of poor people (X1), defined as the number of people who are in all regencies / cities that exist in West Sumatera province measured by thousand inhabitants, the second is expenditure per capita (X2) is the proportion of population expenditure on food and non-food consumption per capita measured in rupiah, the third is government spending in education (X3), is the allocation of government spending in education measured in million rupiah, and the last is government expenditure on Health (X4), is the allocation of government spending in health measured in million rupiah

RESULTS AND DISCUSSION

Prior to model estimation in the panel data, According to Gujarati (2017), there are three types of estimation model of panel data regression model, that are Common effect model, Fixed Effect model and Random Effect model. Redundant test is used to decide the best model between common effect model and fixed effect model, if probability value is higher than 0.05 then the selected model is common effect but if it is smaller than 0, 05 then the selected model is fixed effect. Besides redundant tests, hausman tests also need to be done to select the best model betwen Fixed Effect Model (FEM) and Random Effect Model (REM). If H0 is accepted then Random Effect Model (REM) is more suitable, whereas if H0 is rejected then Fixed Effect Model is more suitable than Random Effect Model.

After Chow and Hausman tests are performed to select suitable models used between Common Effects, Fixed Effects, and Random Effects, then the best model used in this study is Fixed Effect Model.

T test

Based on table 1, variable X1 is poverty and known to have t count 8.319130 with probability 0.0000. it seen that, t count> t table, (t count> t table (2,797). So that, the number of poor people is significant influence Human Development Index in West Sumatra. If the number of poverty is decrease then human development index is increase in West Sumatera.

Whereas for the variable X2, which is per capita expenditure known to have t value is 17.05863 with a probability of 0.0000 (t count> t table), then per capita expenditure variable is a significant explanation of the Human Development Index in

West Sumatra. So, if expenditure per capita increase then human development index is also increase in West Sumatera.

For the X3 variable, namely government expenditure in education is known to have t count value is 3.580583 with a probability of 0.0006 (t count> t table), so the variable of government expenditure in education is a significant explanation of the Human Development Index in West Sumatra. If government expenditure in education increase then human development index is also increase in West Sumatera Province.

For the last variable X4 that is government expenditure in the health sector, it is known to have t count valua is 1.320211 with a probability of 0.1909 (t count <t table). So, government expenditure in health has positive sign and not statistically significant influence human development index in West Sumatera Province.

Determination Coefficient Analysis

R2 (Determination Coefficient) is used to determine how much the ability of the independent variable in explaining the dependent variable comprehensively. Based on the regression results it is known that R2 is 0.999738 which means, the variable of Poverty, per capita expenditure, government expenditure in education and health can explain the human development index variable by 99.97%, while the rest is influenced by other variables.

Test F

F test is used to test whether all independent variables affect the dependent variable. From the results of the regression, the f value is 12494.51 with a probability of 0.000000. Then, F value is significant at alpha 5 percent. Because F value of statistics> F table (12494.51> 2.85) with probability <0.05. It means that, Ho is rejected and Ha is accepted and all the independent variables together have a significant effect on the dependent variable.

Table 1

Estimated Results with Fixed Effect Test

in the Year 2010-2014

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	-0.121692	0.014628	-8.319130	0.0000
X2	0.003245	0.000190	17.05863	0.0000
X3	2.14E-06	5.98E-07	3.580583	0.0006
X4	2.96E-07	2.24E-07	1.320211	0.1909
C	40.20106	2.019479	19.90665	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.999738	Mean dependent var	110.9497
Adjusted R-squared	0.999658	S.D. dependent var	81.05144
S.E. of regression	0.329735	Sum squared resid	7.828234
F-statistic	12494.51	Durbin-Watson stat	1.755743
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.997386	Mean dependent var	68.48758
Sum squared resid	8.269737	Durbin-Watson stat	1.402853

In this study found that poverty and human development index has a significant relationship. This is in accordance with the hypothesis because poverty can mean no access to health, education and jobs. If the number of poor people in a region increases, it can be said that those societies will not be able to fulfill their basic needs such as food, clothing, school including health, so the quality of people and the welfare of those societies will decrease and vice versa.

Poverty is defined as a situation where there are deficiencies of ordinary things to possess such as food, clothing, shelter and water, these things are closely related to the quality of life. Poverty sometimes also means that there is no access to education and jobs that address poverty. If the number of poor people in an area increases, it can be said that the people will not be able to fulfill their basic needs such as food, clothing, school, including health, so that people's quality and social welfare will decrease.

Further, for expenditure per capita, has a positive and significant relationship on the human development index. Because when expenditure per capita increase means the people’s purchasing power which is one of the indicators that determine the value of HDI will also increase. Expenditure or consumption per capita provides a picture of the state of prosperity. The higher the income then the share of expenditure will shift from expenditure to food to non-food expenditure. so expenditure patterns can be used as a way of measuring the welfare of the society, where changes in composition are used as guidance on changes in welfare.

Government spending on education is significant in influencing the human development index but is positively related.While, the government expenditures on health is significant in affecting HDI. Obviously this is not in accordance with the hypothesis and previous research that many of them prove that government spending in the health and education have a positive and significant impact on HDI. But research conducted in West Sumatra by Arif (2011) found the same conclusions that government spending on education is significant to HDI, while government spending on health does not significantly affect HDI. He argues that government spending on health is smaller than in education so the figure does not significantly affect HDI.

In addition, Referring to Law No. 20 of 2003 which states that education funds are allocated at least 20 percent of the National Budget (APBN) on the education sector and at least 20 percent of the APBD, while funds for health are less than for education. as stipulated in Law No. 36 of 2009 states that the government's health budget is allocated at least 5 percent of the state budget, while the provincial and district / municipal government health budget is allocated at least 10 percent of the APBD.

CONCLUSIONS

The development of the Human Development Index of regencies / cities in West Sumatera Province during 2010-2014 has increased with an average increase of 0.52. The highest HDI value during 2010-2014 was 69.31 and included in the medium HDI category.

After analyzing the regression, it is proven that poverty has a negative and significant effect on human development index in West Sumatera Province. Expenditure per capita has a positive and significant influence on human development index. Government expenditure in education has a positive and significant influence on Human development index and the last government expenditure on health has a positive and insignificant effect on human development index in West Sumatera Province.

So that we can conclude that, human development index, can be used as a welfare proxy of a country as well as GDP. For the next research it will be better to unclude gini ratio as one of the independent variable, because the gini ratio shows data about the inequality of income which can be considered as a welfare'state measurements.

REFERENCES

Arif, Hubban. 2011. *Analisis indeks pembangunan manusia di provinsi sumatera barat*. Jurusan Ekonomi Pembangunan Fakultas Ekonomi Universitas Bung Hatta

Badan Pusat Statistik. *Indeks Pembangunan Manusia Indonesia* Berbagai Tahun Penerbitan.

Badan Pusat Statistik (BPS), *Statistik Tahunan*, Berbagai Tahun Penerbitan

Bosman, Pieter. 2010. *The Impact of Human Capital Development on Economic Growth. Studia Universitasis Babes-Bolyai, Oeconomica Vol. 55 Issue 1: 21-40.* South Africa: North West University.

DPR RI. *Penjelasan RUU tentang Hubungan Keuangan antara Pemerintah Pus t dan Daerah*, Diperoleh tanggal 22 Pebruari 2015 dari http://www.djpk.depkeu.go.id/undang-undang/item/download

DPR RI. (2004). *Undang-undang No. 32 Tahun 2004 Tentang Pemerintahan Daerah*, Diperoleh tanggal 26 November 2014 dari www.kpu.go.id/.../UU_32_2004_Pemerintahan Daerah.pdf

DPR RI. (2004). *Undang-undang No. 33 Tahun 2004 Tentang Perimbangan Keuangan antara Pemerintah Pusat dan Pemerintah Daerah*, Diperolehtanggal 26 November 2014 dari http://www.itjen.depkes.go.id

DPR RI. (2009). *Undang-undang Nomor 28 Tahun 2009 tentang Pajak Daerah dan Retribusi Daerah*, Diperoleh tanggal 26 November 2014 dari http://mastel.or.id/files/kelompok Kerja/Pajakdan Telekomunikasi/

Gujarati, Damodar N. (2007). *Dasar-dasarEkonometrika*, Erlangga, Jakarta

Hidayahwati, Nurul. 2011. *Analisis pengaruh tingkat kemandirian fiscal terhadap indeks pembangunan manusia di kabupaten/kota di provinsi jawa timur.*Thesis.NurulHidayahwati 2011

Madan, Sonu. 2012. Human Development and Poverty – a Perspective Across Indian States. JEL I320, I380.

Nartgun et all. 2017. Examination of 2015 Human Development Index in Terms of Education: Comparison of the Continents and Turkey. Journal of Education and Practice ISSN 2222-1735 (Paper) ISSN 2222-288X (Online Vol.8, No.3, 2017).

Sari, Yutika dkk.2012. *Kajian Indeks pembangunan manusia di provinsi Sumatera Barat.*.Jurnal Studi Ekonomi Indonesia. Padang.

Syarifudin, deden. 2008. *Strategi pengembangan desa tertinggal wilayah darat dan pesisir dalam perspektif peningkatan indeks pembangunan manusia*. Thesis. Development studies, institute teknologi bandung.

UNDP. 2004. *Human Development Report.* United Nations Development Programme. New York

UNDP. Human Development Report. Te Real Wealth of Nations: Pathways to Human Development. New York: UNDP, 2010.

Wahid A, Bilal. 2012. *Analisis Pengaruh Pengeluaran Pemerintah terhadap Indeks Pembangunan Manusia (IPM) melalui Pertumbuhan Ekonomi di Makassar periode 1996-2011*, Fakultas Ekonomi dan Bisnis Universitas Hasanuddin. Makassar.