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ANALYSIS THE INFLUENCE OF AVERAGE LENGTH OF SCHOOL AND EDUCATION LEVEL OF WORKERS AGAINST POVERTY IN SOUTH SULAWESI

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Abstract: *This research analyze the influence of the average length of school and education levels of workers proxies with no education, elementary school, junior high school, senior high school and Bachelor degree against poverty. This research is a study of population with a total of 23 districts / cities in South Sulawesi during the years 2004 to 2013 (10 years). Data used in the study used panel data using simultaneous equation model with TSLS approach (Two Stage Least Square). The results of the analysis showed that increasing the level of education attained by the population of South Sulawesi is seen from the average length of the school will have an impact reducing unemployment and poverty. Any increase in the average amount of duration of length school for population school-age population 15 years and over in the district / city of South Sulawesi has the potential to reduce poverty. Then any reduction in the number of workers with no educational level until the same level of senior high school level will likely reduce poverty. Likewise, each an increase in the number of workers with bachelor degree level will likely reduce poverty in 23 districts / cities in South Sulawesi.*

Keywords*: Average Length of School, Level of Education Workers, Poverty.*

INTRODUCTION

Poverty is not just an inability to meet basic needs, such as food, clothing, shelter, but also disadvantages in accessing public goods (health facilities, schools) and access to information. The gap in access to public facilitate (education and health) *that causes most of the poor difficulty competing in the job market. The gap in* access to information have an impact on the quality of human resources. Research by Kuncoro (1997) says poverty is the inability to meet the minimum standard of living the basic needs to be met include food, clothing, board, education, and health.

In addition, Sastraadmadja (2003) cited Arianti *et al.* (2012) says poverty can be distinguished based on the size of income, namely absolute poverty and relative poverty. When viewed based on the patterns of time, poverty can be differentiated into four, includes (1) *persistent poverty*, which is poverty who have chronic or fall

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down; (2) *cyclical poverty*, a poverty that followed the pattern of the economic cycle as a whole; (3) *seasonal poverty*, poverty is often encountered in the seasonal fishing and agricultural case; and (4) accident poverty, which is poverty created due to natural disasters, conflict, and violence, or the impact of a specific policy which caused the decrease in the level of well-being of a society.

Low levels of education are often attached to the inhabitants of less fortunate its economy (poor materially/economy). Low level of education that is owned by residents of the poor make less have adequate knowledge and skills, so as inhibit to obtain decent jobs or unemployed. With jobs that are not feasible or unemployed will impact the occurrence of income/earnings which are not viable and have implications for the distribution of income gap to lead to poverty. Poverty can also inhibit to consume nutrition nutritious, and with low levels of knowledge that will have an impact on the social and environmental conditions are not maintained. From the economic point of view, all of it will produce human resource who are less qualified, or can be said to have low levels of productivity.

According to Beni, (2001) cited in Arianti et al (2012) at introducing the new economic paradigm, there are some central issues that became the focus of attention for the poverty reduction efforts are as follows:

1. *Efforts to reduction of poverty must be local specific. The intent is that* poverty reduction should be implemented by the Government and local communities in accordance with the conditions of the area.
2. Efforts to reduction of poverty in the era of regional autonomy should be followed by improvements the factors of production, among other things: (a) through the establishment of *land reform* policy through local *regulations; (b) the establishment of microfinance institutions to fund the* endeavors of the people.
3. Poverty reduction program should be as a development programs that are productive and contributed to the increase in the income of the poor at the grassroots level in a sustainable way and with intensive mentoring.

In an atmosphere of democratization and decentralization, poverty reduction efforts on an on-going basis of the various related things, which are (a) ceremony the practice of good governance (good governance); (b) a clear division of roles between the Central Government and regions; (c) partnership between Governments, private, and civil society in poverty reduction; and (d) efforts to empowering community hold on to local forces.

Increased investment in human resources on the educational dimension can directly impact on the improvement of the productivity of the workforce encourage an increase in the gross domestic product (GDP), demonstrated by an increase in the stock of capital, trade balance and household consumption. Human resources

investment for education can decrease *poverty incidence, poverty depth* and *poverty severity* (Sitepu *et al., 2010*).

In addition to this, the education sector has also had a significant impact on the socio-economic life of the community. Changes in the level of education, will be able to raise the level of productivity which will further increase the income of a person. This means that the changes and differences in level of education will have an effect on the distribution of people's income, and by itself would reduce the level of socio-economic inequalities in society.

THEORETICAL FRAMEWORK AND HYPOTHESIS

Within the framework of this research describes the poverty of thought influenced by the average of school and the level of education of workers. Duration of school average takes education is completed by the population aged 15 years and over. Then the educational level of workers is the level of education which has been completed by workers at the age above 15 years who have been integrated into the world of work. Both of these variables affect variables of poverty.

Education (The Average Length of School and Level of Education Workers) Affect Poverty

New growth theory emphasizes the importance of the role of the Government is mainly in improving the development of human capital (human capital) and encouraging research and human development to increase productivity. In the reality can be seen with the education investment will be able to improve the quality of human resources is shown with increased knowledge and skills of a person. The higher a person's level of education, the knowledge and expertise will also be increased so that it will encourage increased productivity of work. The low productivity of the poor can be caused by lack of access to education (Rasidin K and Bonar M, 2004). According to Raghbendra Jha/Bagala Biswal (2001) found that the higher the level of education can reduce poverty in India. The data used is cross section data for 10 years, even according to Knowles (1997) quoted in the Riswandi (2009) states that the higher the level of education will give high productivity due to the ever increasing additional products from each additional labor *(marginal product of labour)*.

The latest research results as found by Fattah (2005) using the sample all districts or cities in Indonesia from 1987-2003, found that the influential education upside down on the levels of income distribution gap between regions, meaning that the higher the educational level the more equitable distribution of income between different regions in Indonesia. It is in line with the results of research by Gylfason and Zoega (2001) that examines three sizes of education namely (1) the number of graduates of secondary education, (2) the amount of public expenditure relative

to national income and education (3) estimate the number of years of schooling for girls. Using data 17 countries from *WDI 2000*, results found that a third of the size of education directly affects the distribution of income between countries.

Similarly, Zhang (2002) that examines the distribution of income and expenses on education, using data of 78 countries from the early 1970s until the late 1990s, from data of UNESCO (2001) found that: 1) distribution income in an economy that is uneven, its people wealthy groups tend to dominate political power so that the allocation of public expenditures (public expenditure for education) will not be evenly distributed, as a result of distribution income for the next generation of mist, as well as vice versa. 2) Public expenditure (for education) have had a long-term influence on the distribution of income.

RESEARCH METHODOLOGY

(a) Research Variables

This research uses the free variables of the average length of study/schools, workers with no school, elementary school, junior high school, a senior high school as well as the educational level of workers with Bachelor's degree, and the dependent variable is the poverty in South Sulawesi.

(b) Population and Sample Research

This research using whole or in 23 areas of district or cities in South Sulawesi as a sample with a 10-year period (2004-2013) and data used is the data panel (Pooled Data).

(c) Definition of Operational

As for the definition of operational variables in this study are as follows:

a. Poverty is the number of residents who have average expenditures monthly per capita were below the poverty line in each district or city in South Sulawesi in 2004-2013 (in units of percent). Data taken from the BPS province of South Sulawesi.
b. the average of duration of school (RLS) is the population aged above 15 years by the time attended the last education (in units of years), the Data is taken from the BPS province of South Sulawesi.
c. level of education workers or the workers who have been completed the highest level of education in the area concerned, which consists of: (1) no school; (2) primary school (elementary school); (3) junior high school; (4) senior high schools; (5) university. Data taken from the BPS province of South Sulawesi.

(d) Methods of Analysis

This research analyzes the average influence of duration of schools', the educational level of workers against poverty in 23 areas of districts or cities in South Sulawesi using data panel with a 10-year period (2004-2013). As for the model equations used are as follows:

$$Pov_{it} = \beta_0 + \beta_1 RLS_{it} + \beta_2 TS_{it} + \beta_3 SD_{it} + \beta_4 SMP_{it} + \beta_5 SMA_{it} + \beta_6 SARJANA_{it} + e1_{it}$$

Description:

RLS	=	Average duration length of school
Poverty	=	Poverty Rate
TS	=	Education level of workers with No School
SD	=	Education level of workers with Elementary School
SMP	=	Education level of workers with Junior High School
SMA	=	Education level of workers with Senior High School
SARJANA	=	Education level of workers with bachelor degree
It	=	years and region
e	=	error term

RESULTS AND DISCUSSION

(a) Description Research Objective

Description of the level of poverty for the last 10 years (2004-2013) on the 23rd District/City in South Sulawesi. Most of the 17 regions managed to lose the level of poverty of the inhabitants, but most other city/district/or even every year has increased the number of its inhabitants are poor. The average rate of decrease in poverty rates achieved by 17 area of district or cities were reached between 1%-2% per year or approximately 10%-20% over the past 10 years.

Average length of school during the last 10 years (2004-2013) district/city in South Sulawesi, there are not many changes or just increased an average of 1%-2% in in the 10 years. The city that its population reaches an average of most old length of school i.e. Makassar city, which is achieved an average 10 years or the level of education of its inhabitants until the grade of high school and have reached nine-year basic education programme which has been proclaimed by the Central Government based on Renstra education until year of 2014. Furthermore, in the town of Pare-Pare and Palopo average length of school achieved duration 9.9 years or senior high school class-level 1. However the other district largely still under 9 years or an average of 5-7 years. It indicates that over the last 10 years education level changes measured from the average of the length of school on the 23rd District or cities in South Sulawesi has not yet reached the target of national education

which is basic education 9 years and continuing to grade 12 years or senior high school.

A number of areas of district or cities were mostly the number of workers that no school has decreased, even Enrekang has decreased the number of workers who are not school during the past 10 years amounted to 113%, Bantaeng and Sinjai, each respectively 48%, Pinrang and Luwu decreased respectively by 32% and 29%. However, some areas are still experiencing rising population that works and do not school include Bulukumba, Barru and Gowa, Makassar city that an average of between 3%-6% per year, or in the accumulation increase during the last 10 years by 30%-60%. The number of workers whose education level like elementary school has decreased, example bantaeng is one of the highest levels of descent over the years 2004-2013 which is reached 92%, likewise Sinjai of 92% and Tana Toraja of 42%. The population age 15 years and over who have been working and education level of junior high school is in general decline. Even, in some district a significant decrease in rate on top of 10% per year, such as the districts of Bantaeng from years 2004-2013 decreased by 23% or an annual average decreased on average by 2.3% in the educational level of workers is junior high school. In addition, Tana Toraja of decreasing degree to 26% or on average declined by 2.6% per year. Other areas of Enrekang which is decreased by 18% or the average decreased by 1.8% per year.

The tendency of workers with graduate-level senior high school decline. The condition occurs in most areas of district or city in South Sulawesi during the last 10 years (2004-2013). Tana Toraja and Enrekang are an area with the greatest degree of degression which respectively amounted to 26% or the average declined by 2.6% per year and 20% or an average decline of 2% per year. Some areas in South Sulawesi during the years 2004-2013 (last 10 years) level of education workers have elevated to the level of bachelor degree. Averaging an annual growth of 6% to 9% or about 60%-90% in 10 years. These conditions indicate that each year the world of work in all sectors of the more integrated manpower level of his education level Bachelor's Degree.

(b) Discussion of Research Results

Results of model estimation equations in this research are as follows:

$$Pov_{it} = -3{,}515 + 0{,}055RLS_{it} + 0{,}025TS_{it} + 0{,}022SD_{it} + 0{,}038SMP_{it} + 0{,}010SMA_{it} + 0{,}031SARJANA_{it} + e1_{it}$$

$$T_{stat} = \quad (2{,}597) \quad (2{,}456) \quad (0.664) \quad (3{,}132) \quad (-0{,}352) \quad (6{,}527)$$

$R^2 = 0.462$ Adj $R^2 = 0.433$ SE = 0,0976 DW-Stat= 1,481

Using the classical assumption model approach, this equation model meets the criteria of the *BLUE (Best Linear Unbiased Estimate)*, the regression results of the retrieved value R2 = 0.462. These values indicate that the number of variations of poverty 46,2% explained by five independent variables and its independent variables indicating the positive coefficients. And the remaining 53.8% explained by variables other than the model.

Results of testing the hypothesis can be seen on the *t* test as in the following table:

Table 1
Test results of *t* Model Estimation of simultaneous Equation

Variable Endogen	*Variable Eksogen*	$T_{Arithmetic}$	$T\text{-}_{Tabel}$	*Hypothesis Test*	*Results*
Poverty	RLS	2, 597	1.970	$H_0\ T_{hit} > T_{Table,}$ H_0 rejected, H_1 accepted	RLS influence on poverty
	TS	2,456	1.970	$H_0\ T_{hit} > T_{Table,}$ H_0 rejected, H_1 accepted	TS influence on poverty
	SD	0,664	1.970	$H_0\ T_{hit} < T_{Table,}$ H_0 accepted, H_1 rejected	SD not influence on poverty
	SMP	3,132	1.970	$H_0\ T_{hit} > T_{Table,}$ H_0 rejected, H_1 accepted	SMP influence on poverty
	SMA	-0,352	1.970	$H_0\ T_{hit} < T_{Table,}$ H_0 accepted, H_1 rejected	SMA not influence on Poverty
	SARJANA	6,527	1.970	$H_0\ T_{hit} > T_{Table,}$ H_0 rejected, H_1 accepted	SARJANA influence against poverty

From the results of hypothesis testing in accordance with table 1, obtained results that average growth duration length of school can reduce poverty, decreasing the number of workers who are not in school, the education level of workers with elementary, junior high and senior high school can lower the amount of poverty. For the growth of workers with a Bachelor's degree will be able to reduce the level of poverty. These results correspond to studies by Arianti et al *(2012) who found that the level of education can reduce poverty, thus Raghbendra* Jha/Bagala Biswal (2001) found that the higher the level of education can reduce poverty in India. The data used is cross section data for 10 years, even according to Knowles (1997) quoted in the Riswandi (2009) States that the higher the level of

education will give high productivity due to the ever increasing additional products from each additional labor (marginal product of labour).

The latest research results as found by Fattah (2005) using the sample fro all districts or cities in Indonesia from 1987-2003, found that the influential education upside down on the levels of income distribution gap between regions, meaning that the higher the educational level the more equitable distribution of income between different regions in Indonesia.

CONCLUSION

Based on descriptive data, data analysis and discussion of the results of the research, it can be summed up as follows: any increase in the average amount of length of school for the population school-age above 15 years in the districts or city of South Sulawesi will potentially to reduce the poverty rate. Then any reduction in the number of workers with no education level or no school to the level of education of senior high school will likely reduce poverty. Likewise, each case that increasing the number of workers with a Bachelor's degree will have the privilege of reduce poverty on the 23rd district/city of South Sulawesi. Therefore, in the long term to reduce poverty in South Sulawesi district/city can be done by increasing the number of school participation for a minimum of 12 years in school or university education.

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