

The Effect of Open Unemployment Rate and Level of Vocational High Education to Poverty in North Sumatera Province

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Abstract— Poverty is a condition where people where society can not meet the needs and good life, such as food, clothing, and shelter. Poverty can also lead to ignorance because of the lack of access to education they receive. In this study discusses the effect of open unemployment rate and the level of vocational education to poverty in North Sumatra Province. Sources of data used are secondary data obtained from the Central Bureau of Statistics of North Sumatra in 2001 - 2016. Technical analysis used in the study is multiple linear regression analysis using Eviews 8.1 program. The results of this study indicate that open unemployment rate has positive and insignificant effect on poverty and level of vocational education has negative and significant effect to poverty in North Sumatra province.

Keywords - poverty, open unemployment, level of vo education

I. INTRODUCTION

Poverty is a multidimensional problem that facing almost all countries in the world. Poverty is the inability to fulfil minimum living standards (Mudrajad Kuncoro, 1997).

Poverty is identical with developing countries, for example Indonesia is one of the countries that has faced the poverty problem is quite complicated, poverty is a crucial problem that can not be solved in short time, Ironically the government as a controller of economic activity just give the pay attention to the urban areas that can be said industrial sectors are still fairly modern, while the education, health, facilities and infrastructure of rural areas are inadequate as a result of the funds devoted to the modern sector in urban areas. In addition, prices are constantly increasing In addition, prices are constantly increasing while the standard of need is endless and worsen the economic situation, the population growth in every year cause the labor land less and implicated to unemployment. This is what gave rise inequality in society, so that poverty can not be said as a simple problem. The same thing with new economic view, assume the main goal of economic development is not just for GNP growth but also poverty alleviation. Presentation of the poor people in

Indonesia from 2009 to 2013 has decreased. In 2009 the poverty presentation in Indonesia was 14.15, decreased in 2010 by 13.33, then in 2011 the presentation of the poor people also decreased by 12.49, then in 2012 the presentation of poor people has decreased by 11,66, in 2013 the presentation of poor by 11.47 and in 2016 the presentation of poor decreased by 10.70. In the province of North Sumatra the percentage of poor people is lower than the percentage of poor people in Indonesia. In 2001-2016 the development of poverty rate in North Sumatra tended to increase during the first four periods and decreased until 2016. While the development of poverty in Indonesia tends to fluctuate slightly.

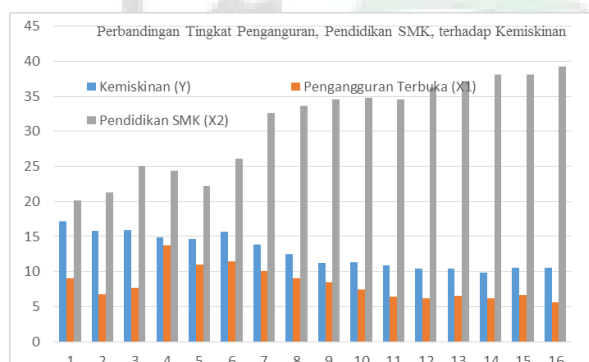
Theoretically, the poverty rate will move followed the unemployment rate. In this case when the unemployment rate increases then automatically the poverty rate will increase. In theory, there is always a relations between unemployment and poverty. Because the unemployed people have no income and the effect is definitely poor. One of the problems that will be discussed in this research is open unemployment. because the unemployment in Indonesia is increasing every year caused of many people who do not have a job while the jobs has provided by the government has not balanced with the amount of job applicants. In the economic development of developing countries, the increasing unemployment is a more complicated issue and more serious than the problem of changes in income distribution that are less profitable to low-income population. The circumstance of developing countries in recent decades has shown that the development that has been created is not able to provide the faster employment opportunities than the prevailing population growth. The problems of unemployment that countries faced from year to year are more getting serious. More concerned that some of poor countries problem are not only the number of unemployed become bigger, but also their proportion of labour entire are getting higher (Sukirno, 1985: 65).

The low capacity of developing countries to increase their total output should be balanced by a decline of population

development rate, so that real income per capita will increase. With the low capacity to increase the total output and balanced by the declining of population growth rate, then an abeyance will happen in economic development (Suparmoko 1992: 45).

The new growth theory emphasized the importance of the government's role especially in increasing the development of human models and encourage research and development to improve human productivity. The facts can be seen by the investing in education will be able to improve the quality of human resources that shown by the increase of knowledge and skill. The higher level education of a person then knowledge and skill will also increase, so that will encourage the increased of productivity work. The low productivity of the poor can be caused by low access to get an education (Rasidin K and Bonar M, 2004).

Hermanto Siregar and Dwi Wahyuniarti (2008), in this study has found that education as measured by the number of people who graduated from junior and senior high school, and diploma have a big influence to decline the number of poor people. This reflects that the development of human capital through education is an important determinant of reducing the number of poor people. The relationship between unemployment, Vocational High School to poverty can be seen from the figure:



According to the above data, the percentage of poor people in North Sumatra is 12.36% in 2014, slightly fluctuated over the four periods until reached 10.53% by 2016. The development of poverty rate in North Sumatra in 2014 was 9.85%, rise up to 10.53% by 2015 and didn't decrease in 2016. While most of the people just finished their education up to high school level. People prefer like to take vocational education because it's their expected in vocational school can get a special skill so that if they graduated they can immediately work. This evidenced by the decreasing of poverty and unemployment rates. Based on the background of the issues that will be discussed and sought the answer in this study is (1) is the influence in partially of the unemployment rate, vocational's education level, to poverty in North Sumatra, (2) Is there influence of unemployment rate,

vocational education level on poverty in province of North Sumatra.

II. LITERATURE REVIEW

A. Poverty

According to experts, among others, Andre Bayo Ala (in Arsyad, 2004: 237) poverty has many aspects, because human needs vary. Poverty is a situation where the annual income of individuals in a region can not meet the minimum expenditure standards that individuals need to be able to live in the region (Siregar and Dwi, 2008).

B. Open Unemployment Rate

According to soekirno (2006) unemployment is "someone who is already classified in the work force who are actively job are hardly be at a certain level, but are unable to obtain the desired job". Irawan and suparmoko (2002) defines unemployment is "those who are in the age of the work force and is looking for a job at the prevailing wage rate. While according to suparmoko (2007) unemployment is "an inability of the labor force to get a job as they need or they want". The third opinion from above can concluded that unemployment is a labor force that is actively looking for a job that suits your skills and education, but because of lack of jobs they haven't got in accordance with the job they want.

C. Vocational Education

Vocational High School is one of the secondary education with the specialization of preparing its graduates to be ready to work. Vocational education has a variety of meanings but can be seen a red thread. According to Evans in Djojonegoro (1999) defines that vocational education is part of the educational system that prepares a person to be better able to work in a group of occupations or one field of work than any other field of work. With the understanding that each field of study is vocational education throughout the field of study is studied more deeply and the depth is intended as a provision to enter the workforce.

Referring to the contents of the Law of National Education System no. 20 of 2003 article 3 on the purpose of national education and the elucidation of article 15 which states that vocational education is secondary education that prepares students primarily to work in a particular field.

Based on the above definition, the vocational secondary school as a sub-system of national education should prioritize preparing its students to be able to choose a career, enter the work field, compete, and develop themselves successfully in the rapidly changing and growing employment.

The achievement of the above objectives depends largely on inputs and a number of variables in the educational process. One of the variables in the educational process that determines the achievement of the objectives of SMK is the cooperation between SMK with the business world and the world of higher education (Depdikbud, 1995). The closer the

relationship between SMK with the world of higher education, the better the logic quality of graduates, which means the quality of graduates can be improved because in the world of higher education, science and technology will develop.

III. METHOD

The research object that used in this research is the cause of poverty that exists in North Sumatera Province. While the subject is the level of unemployment and the vocational education level in the province of North Sumatera. The type of data used in this study is secondary data that's obtained from Central Bureau Statistics North Sumatera, newspapers and magazines, or other publications. Other information in this study comes from literature studies in the form of scientific journals and text books. Data collection techniques that used in data collection is through the literature study. Literature study is a technique to obtain information through notes, literature, documentation and others that have relevance in this study. The data used in this research is secondary data that obtained from the Central Bureau of Statistics. The data was obtained in annual form for each variable.

Operational Definition of Variables

1. Poverty (Y) is an inability to meet various needs such as food, housing, clothing, education, health, and other. The unit has used is the percentage from 2001-2016 in the province of North Sumatera.
2. The open unemployment rate (X1) is a person who does not work at all, looking for work, work less than two days in a week or someone who is trying to get decent work in form of percentages from 2001-2016 in North Sumatera province.
3. Vocational Education (X2) is a formal education unit that provides vocational education at secondary education level as a continuation from junior high school or other equivalent forms or continuation of results learning that has recognized/equivalent of junior high school. The unit used is the percentage from 2001-2016 in the province of North Sumatera.

Data analysis technique

Data analysis techniques has used in this study is multiple linear regression analysis with using Eviews 8.1 program. This analysis is used to determine the magnitude of independent variables to dependent variable with the assumption other variables are constant, where the formula (Luke Setia Atmaja, 2009, p 177).

$$Y = a + bX_1 + bX_2 + \mu$$

Explanation :

Y = Poverty

X1 = Open Unemployment Rate

X2 = Vocational Education

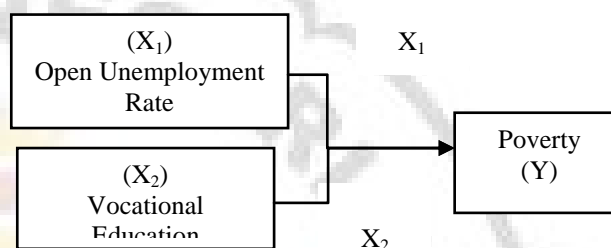
a = Regression constanta

b = Regression coefficient

μ = Term error

Research design

Based on the research hypothesis, the research design can be described and made the regression equation as follows:



Picture.2 Research design

IV. FINDINGS

A. Result and Discussion

Based on the model specification test that has been used then the analysis that using in this research is Hausman Test. Based on the model used in this research (Random Effect) then it can be made a model of panel data analysis to factors that influencing the poverty in north sumatera province in general namely, as follows:

Dependent Variable: (KEMISKINAN__Y_)

Method: Least Squares

Date: 08/17/17 Time: 19:10

Sample: 2001 2016

Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.574118	0.414706	11.02979	0.0000
X1	0.143973	0.077466	1.858539	0.0859
X2	-0.684489	0.087535	-7.819626	0.0000
R-squared	0.905265	Mean dependent var		2.536500
Adjusted R-squared	0.890691	S.D. dependent var		0.192737
S.E. of regression	0.063723	Akaike info criterion		-2.501192
Sum squared resid	0.052788	Schwarz criterion		-2.356331
Log likelihood	23.00953	Hannan-Quinn criter.		-2.493774
F-statistic	62.11259	Durbin-Watson stat		1.647683
Prob(F-statistic)	0.000000			

Statistical Tests

The statistical tests in this study include the coefficient of determination (R²), the significant test (F-statistic test) and the Parameters significant test of the individual (t-statistic test).

a. Coefficient of Determination (R²)

Coefficient of Determination (R²) basically measures how far the ability of the model in explaining the set of variation of the dependent variable. Coefficient value of determination is between zero and one. The small (R²) value means that the ability of independent variables in the dependent variables is quite limited, the value that closes to one variable means independent variables almost gave all the information needed for the dependent variable.

Regression results from the influence of Open Unemployment Rate, and vocational education level on poverty level in North Sumatera province 2001-2016 obtained the value of R² is 0,890. This means that 89 percent of poverty level variables in the Province of North Sumatera are explained by independent variables in the statistical model.

While 11 percent of the poverty level variable is explained by variables outside this study.

b. F-Statistic Test

F test aims to determine the effect of all independent variables (Open Unemployment Rate, Vocational Education Level) to dependent variable namely, Poverty shows that the value of prob F-statistics is 0.0000 <0.05 means independent variables together affect the dependent variable.

c. Test t-Statistics

The t-statistic test aims to see how far each independent variable in individually to explaining the dependent variables.

1. The t-statistic test for Open Unemployment Rate variable is 1.858539 with probability 0.0859, so it can be seen that open unemployment rate has a positive effect but not significant on poverty level in North Sumatera. This is due not always the unemployed people are poor. Although they are unemployed, still able to fulfil the basic needs.
2. The level of vocational education in province of North Sumatra with the number of t-statistics -7,819626 and probability 0.0000, thus it can be seen that the level of vocational education has a negative and significant influence on the level of poverty in North Sumatra Province. This means that every 1% increase of people who graduated from vocational school, will reduce the poverty rate of 7.819626 percent. Vocational school becomes one of the solutions in reducing poverty. Vocational school graduate is really ready to work, and have creativity to create jobs. Especially if people continue their education to undergraduate, maybe poverty will be resolved sooner. In solving the problem, it is required to organize the centre of expertise to map the vocational school graduate so that vocational school graduate is more qualified and competitive.

Interpretation Of Test Results

Random Effect Model

Based on statistical tests has conducted, it can be seen that the resulting regression is quite good to explain the variables that can affect the level of poverty.

1. Open Unemployment Rate

The influence of open unemployment rate on poverty level in North Sumatera based on statistical test obtained that there is positive and significant influence with the number of coefficient 0.143973 and probability 0,0859. This shows that if the open unemployment rate rises by 1% will increase the poverty level by 1.43 percent. This is in accordance with the hypothesis that open unemployment rate variable has a

positive effect on poverty level in the province of North Sumatera.

2. *The Vocational Education Level*

The influence of open unemployment rate on poverty level based on the statistical test is not significant, with coefficient -0,684489 and probability value 0,0000. This indicates if the open unemployment rate rises by 1% will reduce the poverty rate of 6.8 percent.

V. CONCLUSION

Based on the results of panel data regression on Open Unemployment Rate, and Vocational Education Level on Poverty level in the province of North Sumatera. The conclusions can be drawn as follows:

1. Test results showed that the Open Unemployment Rate has a positive and significant effect on poverty level.
2. Test results showed that Vocational Education Level is not significant on Poverty level.

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