

ANALYSIS OF FACTORS AFFECTING THE UNEMPLOYMENT RATE IN SOUTH SUMATERA

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Abstract: Factors that lead to increase the unemployment rate in South Sumatera seen from three dimensions: the supply side (supply side), the demand side (demand side) and the structural side (structural side). This research aims to explain the variables affecting the unemployment rate during 1995 to 2014 in South Sumatera. This study uses time series data from BPS of South Sumatera Province, Indonesia Investment Coordinating Board of Republic of Indonesia, Regional Office of Manpower and Transmigration Department of South Sumatera province and UPTD BLKI of South Sumatera Province. The model used is in the multiple linear regression system form. The estimation results showed that: (1) Senior high school graduate has significant positive effect on the unemployment rate, (2) Skilled labor has significant negative effect on the unemployment rate, (3) College graduate has no significant positive effect on the unemployment rate, (4) capital expenditure has no significant negative effect on the unemployment rate, (5) foreign direct investment has no significant negative effect on the unemployment rate (6) domestic investment has significant negative effect on the unemployment rate, (7) the provincial minimum wage has no significant positive effect on the unemployment rate, (8) the rate of inflation has no significant negative effect on the unemployment rate.

Keywords: unemployment rate, labor, capital expenditure

I. Introduction

Globally the unemployment rate in Indonesia, particularly the youth trend is likely to increase from 2007 to 2013 i.e. from 11.5 per cent rises to 13 per cent, this is because of the impact after economic crisis of 2007 so many youths aged 17 to 25 years are not getting work, the main factor affecting youth unemployment is a transition after finishing education and will get the job. Vocational education is more easily absorbed by the labor market compared to general education; vocational education institution is a link (link) as a powerful path to the labor market. (World Bank, 2013).

According Nurlina (2012), theoretically if labor supply exceeds labor demand, there will be unemployment, thus unemployment is a situation which someone who wants to work and trying to find a job but the demand of his services is nothing. Unemployment raises the cost, both on the individual because of the loss of income and also for the community because of the loss of good and service that actually it could be produced by the input of labor.

Unemployment can be seen from the 3 (three) dimensions: (a) the supply side (supply side), (b) the demand side (demand side), and (c) the structural side (structural side).

From the supply side (supply side), as stated above that amount of person looking for job is much more than available job demand. Numbers of job seekers (unemployed) in South Sumatera are quite a lot, more than 150.000 people during 2004 - 2014. However, in percentage side of the unemployment rate has decreased, from 8,37 percent in 2004 to 4.9 percent in 2014. Graduates of college and senior high school are one of the contributors to the formation of unemployment rate. The bargaining power of this graduate in labor market is still low, this is due to the quality and capability of youth in entering the world of work is still minimal so the company is very selective to get the labor needed. Moreover, when linked with the skill of worker candidate. It is also possible that they who are unemployed wait to be employee and don't have desire for entrepreneurship, whereas entrepreneurship has a great effect on reducing unemployment in Indonesia (Manning and Junankar, 1998).

Substantially there is unemployment gap (unemployment gap) between worker with high education and worker with low education, the unemployment rate of worker with low education is greater than worker with high education (Borjas, 2005).

Company or institution of job seeker wants the labor forces that trained, skilled, having experience in its field to be employed in the company, but in fact the majority of labor force who offered to get a job have not had experience or expertise at all, causing the local labor forces lose to compete with another labor forces in filling job vacancies. Although accepted in the company, their statuses just are regular employees who have a low salary. Infrastructure development is mostly done in urban areas to encourage the labor force in the countryside to come, so that the labor forces pile up in the city and in the region is a shortage of labors. In fact, most regions still require the labor forces to be used for processing their natural resources. As a result, many people are unemployed in the city, because the available jobs can not accommodate all of the labor forces, while the natural resources in region can not be optimally processed and utilized because the labor force available in the region is insufficient to meet those needs because of the shortage of organizer. The emphasis on industrial modernization, technological sophistication and growth of metropolitan cities appear a sizeable geographical imbalance in economic opportunity, and significantly contribute to the hording of migrants to urban areas (Todaro & Smith, 2011).

From the demand side (demand side), company or institution requesting the labor depends on the capability and development of the company. Labor demand is a derived demand. To develop the company is ever so needed investment, both

domestic and foreign direct investment. Investment entering to South Sumatera is quite much required as an injection of company funds, especially company that will replace the technology with new technology.

According to Samuelson and William (2010), investments made by investors regarding the sources of the use such as facilities and infrastructure, building, production equipment and other new machines or supply expected will give benefit from the investment that directly impact to absorb labor and reduce unemployment.

Domestic Investment (DI) produces on the rise of national output and national income so as to solve the problems of inflation, unemployment, balance of payment and pay off of foreign debt. While FDI investment much more moved in infrastructure such as energy, telecommunication, transportation, and water project. This expansion may not only further stabilize the macro economy, but may also facilitate the establishment of a more healthy and efficient financial market, that the presence can strengthened the benefits of FDI and other growth policies of more sound and efficient financial markets, whose presence can amplify the benefits of FDI and other growth policies (Yarui li et al. 2013).

The government also plays a role in reducing unemployment through capital expenditure. Local government spending in the form of capital expenditure in province of South Sumatera from 2008 to 2014 shows that the value fluctuated, government spending in the form of capital expenditure in 2009 had been a shock and fall to 1.002 billion rupiah and in 2011 capital expenditure showed the highest increase reaches 4.779 billion rupiah.

If government spending is primarily funded by a loan-rise, interest rates in the money market will go up because the increasing of demand for money, as a result, private investment will be reduced. But others argue that the increase in government spending will lead to a further increase in revenue level, which in turn could increase private investment, due to an increase in savings as a result of the increase in revenue, which also encourage the greater investment. In addition, there is another opinion says that increase in government spending will not cause investment to decrease, when private agent gives interest rate of discount on government loans by comparing or considering expectation of tax increases when they invest, making government fiscal policy is not relevant for the private investment and the level of output (Wang, 2005).

If happened shocks on the government spending, this will have an impact on increasing the unemployment rate, which means that there is a relationship between local governments spending on the unemployment rate (Meyer et al, 2010).

In structural side (structural side) or policy side, the problem of unemployment can be caused by inflation problem and minimum wage. Policy increases inflation triggered by AW Phillip through Philip's Curve showing the relationship between unemployment and inflation is reversed, the trade off between unemployment and inflation, that in order to achieve a low unemployment rate can only occur if the inflation rate is high. Under condition of inflation, high growth in demand followed by an increase in money supply, in short term increase in money supply leads to an increase in aggregate demand, then this condition will cause entrepreneur will increase output and therefore the unemployment rate is low (Nurlina, 2015). The high rate of inflation may also encourage the labor demand for the increase in provincial minimum wage, this is because all the prices of principal commodity to rise while wages earned are not sufficient to meet these needs. Increasing the minimum wage will increase costs for company, it will add to the problem because company will mark up the price of goods so as to cover the new costs incurred as a result of the increase in the provincial minimum wage which will have the impact on the company in reducing labor in order to costs are not be great for excluded, the increase in the provincial minimum wage will have an impact on narrowing of employment, while according to the Philips curve theory the higher the rate of inflation will have the impact on the low unemployment rate, but on the other hand will increase the provincial minimum wage.

According to traditional economic theory, if a high unemployment rate, wage should decrease, as in developing countries there is always a surplus labor scrambling to find privileged job (privileged job) in the modern sector, it would be contrary to the theory, labor wage organized well both in modern sector will not decrease, the union is not only impede decreasing wages, but also trying to improve it, although there is unemployment or workers competing for getting job. Even if they are not organized, workers of modern sector are usually protected from arbitrary exploitation through the minimum wage and allowance. Therefore, wage can not decrease under a certain level and will usually increase with inflation rising (Manning & Effendi, 1985).

From the phenomenon's mentioned above becomes interest of researcher to analyze and be the issue that will be studied in this research.

1.1 Problem Formulation

- a. How will the senior high school graduate, skilled labor, college graduate, the provincial minimum wage, inflation, capital expenditure, foreign direct investment and domestic investment affect the unemployment rate in South Sumatera?
- b. What is the dominant factor affecting the unemployment rate in South Sumatera?

1.2 The Objective of Research

- a. Analyzing the effect of senior high school graduate, skilled labor, college graduate, the provincial minimum wage, inflation, capital expenditure, foreign direct investment and domestic investment is on the unemployment rate in South Sumatera.
- b. Analyzing the dominant factor affecting the unemployment rate in South Sumatera.

1.3 The Benefits of Research

- a. For government, this research can be used as a reference in overcoming the problem of unemployment that is based on the formulation of strategy and policy measures.
- b. For academic, results of this research expected can be a reference to dig deeper about unemployment.
- c. For community, it can broaden the insight and the horizon in understanding the condition of unemployment.
- d. As a reference of comparator and stimulus for further research.

II. Literature Review

2.1 Unemployment Theory

Classical theory, as analyzed by Pigou (1933) and Solow (1981), argues that the labor market consists of demand and supply of labor. Labor demand is a derived demand is from the marginal product of labor. Demand curve is a negative function of the real wage, if wage increases the quantity of labor demand will decrease and will have impact on rising unemployment and vice versa if wage decreases the labor demand will increase and unemployment will decrease. Labor supply comes from worker choice, whether to spend most time for working or not working (leisure). Supply of work hour is a positive function of the real wage, because if real wage rises, worker provides more hours of work. On balance (equilibrium), demand and labor supply intersecting at the point of clearing that determines the equilibrium level of real wage and field work.

The composition of unemployment can change, increase and decrease. The movement in the unemployment rate has two dimensions: the short-term movement and the longer-term movement of time. Short-term movement related with increase and decreases in the business cycle, if a business has decreased the number of worker absorbed will be less than if the business has increased. Long-term movement can be seen in booming period and recession period. In booming period the unemployment rate decreases whereas while the high unemployment rate during the recession is a lot on termination of employment (PHK) (Tarmizi, 2012).

2.2 Theory of Human Capital

Creativity, skill, and productivity of work, unlike the form of other capital needed as tool, human capital can invest themselves through various forms of human resource investment including formal and informal education, work experience, health and nutrition and transmiration (Schultz, 1961).

The basic assumption of human capital theory is that someone can increase his income through education. Each additional one year of school means that on the one side improve the workability and the level of a person's income, but on the other hand delaying receipt of income during one year in following the school, in addition to delaying receive the income, someone who goes to school has to pay the fees directly, the amount of income which is receipt for his lifetime calculated in present value or net present value. Present value is distinguished in two respects, only through senior high school education or further study at university before working (Kaufman & Hotckiss, 1999).

2.3 Theory of Employment

The Keynes theory of employment was based on the view of the short run. In the short run, he assumed that the factors of production, such as capital goods, supply of labor, technology, and efficiency of labor, remain unchanged while determining the level of employment. Therefore, according to Keynes, level of employment is dependent on national income and output. In addition, if there is an increase in national income, there would be an increase in level of employment and vice versa. Therefore, Keynes theory of employment is also known as theory of employment determination and theory of income determination (Nitisha, 2015).

According to Tarmizi (2012), the employment problem is not only a demographic problem but included in the domain of economic. The working of supply interaction and labor demand in the labor market can only be understood by using microeconomic theory thought. The interaction of demand and supply of labor to work through market mechanism generate scale of wage, which differ according to the characteristics of the market if market is perfectly competitive, monopsony or monopoly.

2.4 Senior High School

In the Act of RI No. 20 of 2003 on National Education System Article 18 clause 2 and 3 explains "Secondary education consists of general secondary education and vocational education" and "Secondary education is senior high School (SMA), Madrasah Aliyah (MA), vocational school (SMK), and Madrasah Aliyah Vocational (MAK), or other forms equivalent" (Republic Act. 20 yrs. 2003).

Senior High School (SMA) also aims to prepare students to be members of community who have the ability to hold a reciprocal relationship with the socio-cultural environment and natural surroundings, and can develop further capability in the world of work or high education (Ihsan, 2005).

2.5 Skilled Labor

According to Law No. 13 of 2003, labor is any person who is able to work in order to produce goods or service to meet the needs of himself and the community. Labor can also be interpreted as power and human activity in the production process that is based on the basic wage that he deserves. From definition above, means that anyone on the age of a few weeks who can work producing good or service can be called as labor.

Training and skills development is understood in broad terms, covering the full sequence of life stages. Basic education gives each individual a basis for the development of their potential, laying the foundation for employability. Initial training provides the core work skills, general knowledge, and industry based and professional competencies that facilitate the transition from education into the world of work. Lifelong learning maintains individuals' skills and competencies as work, technology and skill requirements change. Different countries focus on different elements as they see relative strengths and weaknesses in their own skills development systems, and as they learn more about innovations and experience in other countries (ILO, 2011).

2.6 College

In Government Regulation No. 30 of 1990, Article 1 clause 1 explains that the higher education is education at a higher level than in secondary education in school education line, the purpose of higher education are: (1) Preparing students to be members of public who have academic ability and professional work to implement, develop and create science, technology and art. (2) Developing and disseminating science, technology and art as well as to optimize its use to improve people's lives and enriching culture.

2.7 Capital expenditure

Holden and Sparman (2013), examines the impact of government purchases on unemployment in 20 OECD countries, for the period 1980-2007. This study observed that an increase in government purchases equal to one percent of PDB is found to reduce unemployment by about 0.3 percentage points in the same year.

According to the Government Accounting Standards (SAP), the definition of capital expenditure is the expenditure made in the context of capital formation that are adding fixed assets/inventory that benefit more than one accounting period, including the expenses for maintenance of maintain or adding the useful life, as well as increasing the capacity and quality of assets and the cost of other assets.

2.8 Investment Theory

On the condition of the country MPC (marginal propensity to Consume) is low, it will cause the difference between national production (assuming full employment) with the level of consumption (use of the product) becomes larger. In order to achieve the use of full employment, entrepreneurs should make an investment equal to the difference between the level of consumption and production. If the amount of investment does not reach that amount, there will be unemployment. Due to the condition in real conditions is not always achieved, and then unemployment will always be there (Keynes, 1936).

Investment is often called the capital investment, but a lot of different senses of economists explain the investment. According Deliarnov (2002) that investment is the company's overall expense which includes expenses for purchase of raw material/material, machineries and factory equipment as well as all of the other capital equipment's required in production process. Spending for an office building of factory where employees live and the other building construction. Changes in value of stock or reserve items as a result of changes in the number and price.

2.9 Foreign Direct Investment

Foreign investment in the form of foreign direct investment FDI, especially regarding the establishment/formation of a new company, the case is somewhat different, because the concerned project must not only meet the formal requirement, but also the requirement of material. With the formal requirement is intended here that must be met regulatory requirements of the country concerned, while requirement of material is in the sense that the project will be able to meet the state economic usefulness (Sunny, 1972).

2.10 Domestic investment

According to the law No. 25 of 2005 regarding Investment, domestic investors can be done by an individual of WNI, domestic business entity, and/or government of state investing in the territory of Republic of Indonesia. In the Presidential Regulation No. 36 of 2010 on Amendment List of Business Fields Closed and Open Business with the requirement in Investment Sector activities of businesses or types of business field opened to investment activity, except business field or type of business that is declared closed and opened with requirement and restriction of domestic capital ownership over the business field.

2.11 Inflation Theory

Inflation is an increase in the overall price level. Inflation can be caused by a reaction from the demand side and the supply side (Lisna, 2007). Cost-push Inflation is also called inflation from the supply side (supply shock inflation). The factors that cause inflation from the supply side: first, due to the increase in wages this is the union demand, which is also known as

(wage-push inflation). Second, due to the high pricing by monopolistic or oligopolistic industry, this is also known as (profit-push inflation). Third, due to the transmission of inflation from the exporting country to the importing country or called (import driven).

2.12 Provincial Minimum Wage Theory

The increase in minimum wage generally receive big public support, economists generally rely on the above analysis to argue that the policy will lead to an increase in the unemployment rate in the labor market with low wages (Swcollege.com.2003).

Keynes in theory says the decrease of minimum wage will stimulate labor demand so directly the real wage also reduces (Hall, 1975). Wage is one of the factors that influence the causes of unemployment. Wage is compensation received by one of labor unit in the form of a sum of money paid to him (Mankiw, 2000).

2.13 Framework of Thought

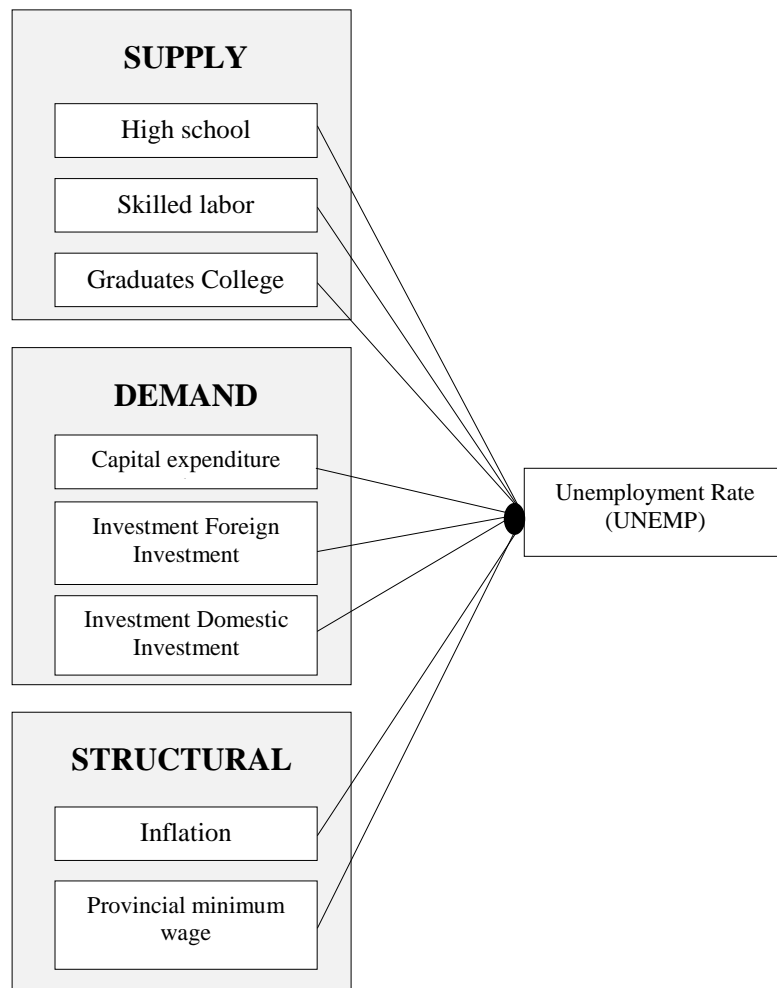


Figure 1. The framework analysis of the factors affecting the level of unemployment in South Sumatera

Hypothesis

Hypothesis 1:

Senior High school graduate (SMA) has positive effect significantly on the unemployment rate (UNEMP).

Hypothesis 2:

Skilled labor (TPIL) has negative effect significantly on the unemployment rate (UNEMP).

Hypothesis 3:

College graduate (PT) has positive effect significantly on the unemployment rate (UNEMP).

Hypothesis 4:

Capital expenditure (BMOD) has negative effect significantly on the unemployment rate (UNEMP).

Hypothesis 5:

Foreign direct investment (FDI) has negative effect significantly on the unemployment rate (UNEMP).

Hypothesis 6:

Domestic investment (INVESDN) has negative effect significantly on the unemployment rate (UNEMP).

Hypothesis 7:

Inflation (INFL) has negative effect significantly on the unemployment rate (UNEMP).

Hypothesis 8:

The minimum wage (MWAGE) has positive effect significantly on the unemployment rate (UNEMP)

III. Research Method

3.1 Scope

This research examines the unemployment rate, and factors that affect unemployment rate in South Sumatera. Scope of analysis in this research is a region in South Sumatra, a quantitative approach using the data period 1995 - 2014 of BPS South Sumatera Province, Bank Indonesia, and Investment Coordinating Board of Republic of Indonesia, UPTD BLKI of South Sumatra Province and Department of Ministry of Manpower and Transmigration South Sumatera Province.

3.2 Types and Data Sources

Data used in this research is secondary data. The type of data used is time series data (time series) of the year 1995-2014, data sources are, among others: Official publication of the Central Statistics Agency (BPS) of Indonesia, Official publication of the Central Statistics Agency (BPS. Prov. South Sumatera), Social Survey of National Economy (SUSENAS), Publication of the Ministry of Manpower and Transmigration, Publication of Bank Indonesia, the Capital Investment Coordinating Board of Republic of Indonesia, UPTD BLKI of South Sumatera Province and parameters of the equation system obtained from various previous studies considered relevant.

3.3 Model Research

This research model is established in a system of multiple linear regressions i.e. unemployment rate (UNEMP) by the following equation:

$$\text{UNEMP} = f(\text{SMA}, \text{TPIL}, \text{PT}, \text{BMOD}, \text{FDI}, \text{INVESDN}, \text{INFL}, \text{MWAGE})$$

Information:

Y = UNEMP is unemployment

X1 = SMA is senior school graduate in South Sumatera

X2 = TPIL is the number of vocational school graduate and graduates of vocational training center in South Sumatera

X3 = PT is college graduate in South Sumatera.

X4 = BMOD is capital expenditure of provincial government of South Sumatera

X5 = FDI is investment of foreign investment in South Sumatera

X6 = INVESDN is total domestic investment in South Sumatera

X7 = INFL is the inflation level of South Sumatera

X8 = MWAGE is the provincial minimum wage

Operational Definition of Variable

- Unemployment rate (UNEMP), unemployment rate is the number of unemployed labor divided by the total labor force multiplied by 100 percent, with percent unit and ratio measuring scale.
- Graduates of senior high school (SMA), is the number of students who graduated from a senior high school education or SMA in South Sumatera with person unit and ratio measuring scale.
- Skilled Labor (TPIL) is a labor that has a background in vocational high school graduates coupled with graduates of vocational training centers in South Sumatera with the person unit and ratio measuring scale.
- Graduates of College (PT), is the number of college graduates in South Sumatera with the person unit and ratio measuring scale.
- Capital Expenditure (BMOD) is the total of capital expenditure that is used to add a fixed asset/inventory in amount of million rupiah and ratio measuring scale.
- Foreign Direct Investment (FDI) is the investment made by foreign citizens in South Sumatera with amount of thousand of dollar and ratio scale.
- Domestic Investment (INVESDN) is domestic investment added with an investment of loans of Micro, Small, and Medium Enterprises by type of use in South Sumatra province from 1995 to 2014 taken from BPS data of South Sumatera province with amount of million rupiah and ratio measuring scale.
- Inflation (INFL) is the value of the average inflation rate per year obtained from the Central Statistics Agency of South Sumatra province from 1995 to 2014, with unit percent and ratios measuring scale.
- Provincial Minimum Wage (MWAGE), is the minimum wage that applies to the all districts/cities in South Sumatera province, with the rupiah unit and ratio measuring scale.

3.4 Data analysis technique

This research uses descriptive analysis of qualitative and quantitative descriptive analysis with multiple linear regression equation, using ordinary least squares method/ordinary least squares (OLS), further testing simultaneously using F-count. Significance is determined by comparing the F-count with the F-table or sees the significance at the output of Views and SPSS. In some cases it can happen that simultaneously (synchronously) some variables have a significant effect, but partially not.

3.5 Classic assumption test

a. Normality Test

Normality test aims to test whether in regression model of intruder or residual variables have a normal distribution. Using Kolmogorov-Smirnov test method, decision-making that is if the significance value is greater than 0.05 then the data is normally distributed, on the contrary, if the significance value is below 0.05 then the data is not normally distributed.

b. Multicollinearity Test

Multicollinearity can also be seen from the value of tolerance and variance inflation factors (VIF). Low tolerance value equal to the value of high VIF ($VIF = 1/\text{tolerance}$). Cutoff value that is commonly used to indicate the presence of multicollinearity is the tolerance value 0,10, or equal to the value of VIF 10.

c. Autocorrelation Test

One way to test whether the autocorrelation can be used Durbin Watson test (D-W test).

d. Heteroscedasticity Test

Testing method that can be used among others that is use Breusch Pagan Godfrey test. If the p-value $\text{Obs} \cdot R\text{-square} <$, it is concluded that the model passes heteroscedasticity test.

3.6 Statistic Test

a. Coefficient of Determination

This coefficient indicates how big variation percentage of the independent variable used in the model is able to explain the variation of dependent variable. R^2 is equal to 0, then there is no iota of influence contribution percentage given by independent variable on dependent variable, or a variation of dependent variable used in the model does not explain the iota variation of independent variable.

b. F-Test

F-test is used to determine the effect of independent variable together (simultaneously) on dependent variable. Significant means the relationship happened can apply to population. Use of significance level of vary, depending on the desire of researcher, i.e. 0,01 (1%); 0,05 (5%) and 0,10 (10%). The F-test result is seen in the table ANOVA in the column sig. For example, we use a significance level of 5% (0,05), if the probability value $< 0,05$, it can be said there is significant effect simultaneously between independent variable on dependent variable, however, if the significance value $> 0,05$ then there is not significant difference effect simultaneously between independent variable on the dependent variable.

c. t-Test

The t-test is used to test each variable partially. T-test result can be seen in the coefficients table on the column of sig (significance). If the probability of t value or significance $< 0,05$, it can be said that there is effect between independent variable on the dependent variable partially, however, if the probability t value or significance $> 0,05$, it can be said that there is no significant effect of each -masing independent variable on the dependent variable.

IV. Result and Discussion

4.1 Estimation Model of Unemployment Rate (UNEMP)

The analytical method that has been formulated interpret that independent variable such as: senior high school graduate (SMA), skilled labor (TPIL), college graduate (PT), capital expenditure (BMOD), investment of foreign direct investment (FDI), investment domestic (INVEDSN), inflation (INFL) and the provincial minimum wage (MWAGE), are the factors that influence the rate of unemployment (UNEMP), then the estimation results are shown in Table 4.1 below:

4.2 Estimates of senior high school graduate, skilled labor, college graduate, the provincial minimum wage, inflation, capital expenditure, foreign direct investment, domestic investment on the unemployment rate in South Sumatera in 1995-2014

Variable	Coefficient	Std Error	t-Statistic	Prob.	VIF	Std. Coef
C	-0,174677	0,174001	1,003888	0,3370	NA	
LSMA	0,090662	0,013413	6,759368	0,0000	4,833822	1,297
LTPIL	-0,072329	0,015592	4,638792	0,0007	3,306925	-,736
LPT	0,001348	0,008130	0,165814	0,8713	2,610255	,023
LBMOD	-0,001667	0,003663	0,454999	0,6580	5,973215	-,097
LFDI	-0,001533	0,000743	2,063287	0,0635	4,320915	-,374
LINVESDN	-0,006134	0,001362	4,503352	0,0009	4,025558	-,789
INFL	-0,000126	0,000112	1,125298	0,2844	1,514327	-,121
LMWAGE	0,012928	0,006167	2,096245	0,0600	9,462198	,563
R2= 0,916201, R2 adjusted = 0,855257, F = 15,03338 (sig = 0,000066), D-W = 2,188312						

Source: Data processed 2016.

The transformation result above is resulted equation of unemployment rate (UNEMP) as follows:

$$\begin{aligned}
 \text{UNEMP} = & -0,174 + 0,090 \text{ LSMA} - 0,072 \text{ LTPIL} + 0,001 \text{ LPT} - 0,001 \text{ LBMOD} \\
 & (-1,003) \quad (6,759) \quad (-4,638) \quad (0,165) \quad (-0,454) \\
 & - 0,001 \text{ LFDI} - 0,006 \text{ LINVESDN} - 0,0001 \text{ INFL} + 0,012 \text{ LMWAGE} \\
 & (-2,063) \quad (-4,503) \quad (-1,125) \quad (2,096)
 \end{aligned}$$

R-Square = 0,916
 Adjust R-Squared = 0,855
 F-statistic = 15,033
 Durbin-Watson = 2,188

a. Normality test

To test whether the data are normally distributed or not, to do the Jarque-Bera test. H0: error term is normally distributed and H1: error term is not normally distributed, if p-value < 0,05, then H0 is rejected, because the p-value = 0,728 > 0,05 then H0 is accepted. Based on the normality test result by the Jarque Bera, obtained the probability value of 0,728 is > 0,05, means that the model can be said to be normally distributed.

b. Multicollinearity Test

The interpretation results show that there is no multicollinearity problems on these variables, the value of variance inflation factors VIF of senior high school graduate (4,83), skilled labor (3,30), college graduate (2,61), capital expenditure (5,97), foreign direct investment (4,32), domestic investment (4,02), inflation (1,51) and the provincial minimum wage (9,46). Therefore, the variance inflation factors (VIF) for each independent variable are less than 10, so the unemployment rate (UNEMP) which estimated does not contain multicollinearity problem. Thus the estimated parameters of t-model can be interpreted as a partial or independently.

c. Autocorrelation Test

H0: no serial correlation, H1: No serial correlation, if the p-value obs*-Square < 0,01, then H0 is rejected, because the p value -obs*R-squared = 0,371 > 0,01, then H0 is accepted. The conclusion is the confidence level of 90%, it can be said that there is no autocorrelation in the regression model, residual of regression equation to unemployment rate model based on the serial correlation test according to Breusch-Godfrey that no autocorrelation serial in error term with a probability value above 0,05.

d. Heteroscedasticity Test

This research used a test Breusch-Pagan-Godfrey to determine whether there is heteroscedasticity or not. H0: there is no heteroscedasticity and H1: there is heteroscedasticity, if $p\text{-value obs} \cdot R\text{-squared} < \alpha$, then H0 is rejected, because the $p\text{-value obs} \cdot R\text{-squared} = 0.309 > 0,05$, then H0 is accepted.

The conclusion is the 95% confidence level, it can be said that there is no heteroscedasticity in the regression model, where the residual of regression equation for the unemployment rate model based on heteroscedasticity test according to Breusch test-Pagan-Godfrey is no heteroscedasticity on error term with a probability above 0,05.

e. Coefficient of Determination

R-Square value in the explanation of value quantity is 0,916, means that the contribution of independent variables SMA, TPIL, PT, BMOD, FDI, INVESDN, INFL and MWAGE on variations of dependent variable changes of UNEMP by 91,6 percent, meaning that the independent variables used to be able to explain the dependent variable in the model, while the remaining 8,4 percent is explained by other variables outside the model.

f. F-Test

If Prob. value of F count is larger than an alpha level of 0,05 (5%), the regression model meets the assumptions of linearity and conversely, if Prob. value of F-count is smaller than $F\text{-table} = 2,95$, it can be said that the model does not meet the assumption of linearity. Prob. Value of F is calculated from the estimation results of 15,03 from level $\alpha = 5\%$ compared with the F-table of 2,95. In this case the value of 15.03 is greater than 2,95 so it can be concluded that regression model has met the assumption of linearity.

g. t-Test

Variable	t-Statistic	Prob
C	-1,003888	0,3370
LSMA	6,759368	0,0000
LTPIL	-4,638792	0,0007
LPT	0,165814	0,8713
LBMOD	-0,454999	0,6580
LFDI	-2,063287	0,0635
LINVESDN	-4,503352	0,0009
LNFL	-1,125298	0,2844
LMWAGE	2,096245	0,0600

Source: Data processed 2016.

H0: no significance and H1: There is no significance, if the probability of statistical t-test results $< \alpha$, then H0 is rejected, from the estimation results obtained in t-statistic will be compared with t-table, namely (2,200).

Graduates of senior high school (SMA) has positive and significant effect on unemployment rate (UNEMP) in South Sumatera because t-count is greater than t-table (6,759 > 2,200) at a significance level $\alpha = 5\%$.

Skilled labor (TPIL) has negative effect and significant on the unemployment rate in South Sumatera, this can be seen from t-count value is bigger than t-table that is (4,638 > 2,200) with a significance level $\alpha = 5\%$.

College graduates (PT) has positive effect and no significant on the unemployment rate because the t-count value is smaller than t-table value that is (0,165 < 2,200) at a significance level $\alpha = 5\%$,

Capital expenditure (BMOD) has negative effect and no significant on the unemployment rate in South Sumatera. It can be seen from the t-count value is smaller than t-table value that is (0,454 < 2,200) with a significance level $\alpha = 5\%$.

Foreign direct investment (FDI) has negative effect and no significant on the unemployment rate in South Sumatera. It can be seen from the t-count value is smaller than t-table value that is (2,063 < 2,200) with a significance level $\alpha = 5\%$.

Domestic investment (INVESDN) has negative effect and significant on the unemployment rate in South Sumatera, it can be seen from the value t-count is bigger than t-table that is (4,503 > 2,200) with a significance level $\alpha = 5\%$.

Inflation rate (INFL), has negative effect and no significant on the unemployment rate in South Sumatera. It can be seen from the t-count value is smaller than t-table is (1,125 < 2,200) with a significance level $\alpha = 5\%$.

Provincial minimum wage (MWAGE) has positive effect and no significant on the unemployment rate in South Sumatera for t-count value is smaller than t-table value that is (2,096 < 2,200) at a significance level $\alpha = 5\%$

4.3 Analysis Of Factors Affecting The Unemployment Rate In South Sumatera In 1995-2014

Senior High school graduate and Unemployment Rate. The estimation results indicate that graduate of senior high school (SMA) has a positive and significant effect on the unemployment rate (UNEMP). The estimated value of 0,098 means that if the number of senior high school graduate (SMA) rise 1 percent, the unemployment rate (UNEMP) will also increase by 0,090 percent and has significantly effect. Referring to the first hypothesis, namely: senior high school graduate (SMA) has significantly positive effect on the unemployment rate (UNEMP), and then the hypothesis is accepted. The implication is: (1) senior high school graduate (SMA) is classified as not having skill to blow the competition against skilled labor such as vocational schools in labor market. Company receives labor on more priority for skilled labor and trained (vocational school), this causing the labor of senior high school graduates are unemployed. (2) Senior high school graduates are unemployed because they can not go to college, to continue their education to college requires a considerable cost while their parents can not afford financially. (3) the ratio of number of senior high schools is less than 70 percent of the total number of secondary school therefore this case is to be problem of the number of Senior high school graduates are unemployed.

4.4 Skilled Labor and Unemployment Rate

The estimation result indicates that skilled labor (TPIL) has negative effect and significant on the unemployment rate (UNEMP) in South Sumatera. The estimated value of 0,072 means that if the amount of skilled labor (TPIL) rises 1 percent, the unemployment rate (UNEMP) will decrease by 0,072 percent and has significantly effect Referring to the second hypothesis, namely: skilled labor (TPIL) has negative significantly effect on the unemployment rate (UNEMP), then the hypothesis is accepted, implication is: (1) skilled labor such as the vocational school graduates already have a stock of skills. (2) Skilled labor is ready to enter the labor market. (3) The ratio of the number of vocational schools is 30 percent of secondary school, with a lower ratio of the number of senior high schools, the vocational school graduates are less likely to be unemployed than senior high school graduates.

4.5 College graduate and unemployment rate

The estimation results show that college graduates (PT) has a positive effect and not significant ON unemployment rate (UNEMP) in South Sumatera. The estimated value of 0,001 referring to the third hypothesis, namely: college graduate (PT) has significantly positive effect on the unemployment rate (UNEMP), and then the hypothesis is rejected, meaning that the number of college graduate (PT) in South Sumatera on average increased by 0,001 percent and does not give effect significantly.

The implications are: (1) College graduate that has had the provision of science already has the mental preparation to enter the labor market. (2) Part of college graduates continues their education to the higher level of education. (3) Part of college graduates has been able to open their own business. (4) Some woman of college graduates married to follow their partner.

4.5 Capital Expenditure and Unemployment Rate

The estimation results indicate that capital expenditure (BMOD) has a negative effect and not significant on the unemployment rate (UNEMP). In theory, capital expenditure will be able to reduce unemployment because (1) the capital expenditure is widely used to build and buy assets such as land, building, road, bridge and infrastructure. The asset development requires labor having impact on a reduction in the unemployment rate. (2) Capital expenditure is used for construction of infrastructure such as the opening of new areas that will encourage investors to invest in building industrial park that will have impact on the creation of work field so that it can cope the reduction of unemployment rate.

4.6 Foreign Direct Investment and Unemployment Rate

The estimation result indicate that foreign direct investment (FDI) has a negative effect and not significant on the unemployment rate (UNEMP). It is assumed: (1) Foreign direct investment (FDI) invests more in building industry-oriented using of new technologies that little use of human resources. (2) Foreign direct investment (FDI) invests by buying shares in companies in the country, it does not have impact a directly on opening labor field (3) Foreign direct investment (FDI) uses skilled labor brought directly from the state of capital owners having impact on labor discrimination between local and foreign workers.

4.7 Domestic Investment and Unemployment Rate

The estimation results indicate that domestic investment (INVESDN) has a negative and significant effect on the unemployment rate (UNEMP). This is because: (1) Domestic Investments (INVESDN) in private investment is widely used to build the trade center, the industry requiring a lot of labors; it will absorb the labor having impact on the unemployment rate to fall. (2) Domestic Investments (INVESDN) build a more business-oriented on labor-intensive. (3) Domestic Investments (INVESDN) recruit skilled labor to run the business, in terms of cost it is more profitable.

4.8 Inflation and Unemployment Rate

The estimation results indicate that the rate of inflation (INFL) has a negative relationship and not significant effect on the unemployment rate (UNEMP). The implications are: (1) The high inflation rate could encourage the central bank to raise the interest rates, it can cause contraction or negative growth in real sector and have an impact far on the rising unemployment rate. (2) high inflation rate causes the price of expensive goods, the purchasing power of public buy goods to be reduced, manufacturer cuts the production level that resulted in the company reducing the labor, giving rise to new unemployment.

4.9 Provincial Minimum Wage and Unemployment Rate

The estimation results indicate that the provincial minimum wage (MWAGE) has a positive relationship and not significantly effect on the unemployment rate (UNEMP). The implications are (1) the increase of the minimum wage level on the one side will increase the company's costs. The increase of company's costs will cause prices of goods produced increases; consumers will reduce purchases the good because it is expensive. (2) Its impact company will reduce production level due to reduced output produced; the impact of reduced production causes the demand for labor and opportunity to work are also reduced so that the unemployment rate will rise.

V. Conclusion and Suggestions

5.1 Conclusion

- a. The test results of determination coefficient show the number of senior high school graduate (SMA), skilled labor (TPIL), college graduate (PT), capital expenditure (BMOD), foreign direct investment (FDI), domestic investment (INVEDN), the rate of inflation (INFL) and the provincial minimum wage (MWAGE) on unemployment rate (UNEMP) in South Sumatera show that the value of 0,9162. This value indicates that: Model established is well enough that is 91,62 percent, variations of dependent variable (dependent variable) unemployment rate (UNEMP) can be explained well by the eight independent variables (independent variable). While 8,38 percent of the rest is explained by other factors outside the model, which assumed that the number of basic education schools graduates (SD and SMP) to be a factor outside the model.
- b. Variable factor i.e. senior high school graduate (SMA), skilled labor (TPIL), domestic investment (INVEDN) has significant effect on the unemployment rate (UNEMP) in South Sumatera, whereas college graduate (PT), capital expenditure (BMOD), foreign direct investment (FDI), the inflation rate (INFL) and the provincial minimum wage (MWAGE), has no significant effect on the unemployment rate for t-test is smaller than t-table.
- c. The most dominant factor affecting the unemployment rate (UNEMP) is determined from the results of standard beta coefficient that is senior high school graduates with a value of 1,297.

5.2 Suggestions

- a. Senior high school graduate (SMA) is the most dominant factor affecting the unemployment rate, suggested to optimize namely: (a) Minimizing the ratio of senior high school to vocational school in order to be reduced from 70 per cent. (b) To equip senior high school graduate to gain skill (TPIL) on training institutions such as the vocational Training Center. (c) Providing training of business development (Entrepreneurship) in the school curriculum, or following internship in a company to gain skill.
- b. Skilled labor (TPIL), to be able to be improved, namely: (a) Increasing the ratio of vocational school more than 30 percent of senior high school, (b) Improving training in vocational training center by improving the facility and infrastructure and adding the training tools of work such as: the latest Automotive Engineering, Boat machineries, Electronic test equipment appropriate to the needs of the industry. (c) Establishing vocational training center working in the Regency and City that are not yet available.
- c. The Government of South Sumatera Province is suggested to encourage more domestic investors to invest in the building industry, the service sector, agriculture and trade that aim can open a lot of work field in South Sumatera, by investor contribution to build business indirectly will absorb labor, which directly will reduce the number of unemployed.
- d. The model developed in this research is still limited because only look at the variable of senior high school graduate, skilled labor, college graduate, the provincial minimum wage, the inflation rate, capital expenditure and domestic investments in South Sumatra. Therefore, further research is needed more in-depth by adding a new variable, using data and method more fully so that it can complement existing research results and the results can be used as a material consideration by various parties and be material consideration in economic development in South Sumatera.

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