THE MODEL OF INVESTMENT AND EDUCATION ON THE LEVEL OF LABOR ABSORPTION

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ABSTRACT
Factors that affect the employment rate include the amount of Investment in that year and the average length of schooling. Based on the description above, this paper is made to determine the effect of Investment and education on employment in West Java Province. This study uses secondary data in the form of time series with an observation period of 2010-2018. Researchers used literature study methods in data collection. The data analysis technique used is quantitative analysis. Education represented by the Average Length of Schooling (RLS) should be improved through programs and policies that favor education so that the absorption rate of labor can be increased optimally. Improving the quality of education should be focused on improving the quality of human resources and life skills, which are directly related to employment in West Java Province. Labor-intensive Investment, which involves the people of West Java Province, should be optimized so that employment can be optimal.

INTRODUCTION

In the development process, Investment plays a vital role as a driving force in employing the population. With the fulfillment of employment opportunities for the people, it is hoped that they will meet the labor market, which in turn will improve the welfare of the community. The rate of investment development in West Java Province in 2010-2018 has fluctuated. The smallest amount of Investment in 2013 was Rp. 268.318 trillion, and the enormous amount of Investment in 2018 amounting to Rp. 352,312 billion. These fluctuations are caused by many factors, such as the economic, political, security, and social conditions that develop in society (Opletalová, 2015).

Another critical indicator in absorbing labor is the level of education. Education is one of the main assets that need to be fulfilled to carry out sustainable development. With high-quality human capital, it is believed that economic performance will also be better. The quality of

human capital, for example, can be seen from the level of education, health, or other indicators, as can be seen in various published human development reports (UNESCO, 2015). The Indonesian government has implemented a regional autonomy system since 2001. With this local autonomy system, each region has a greater responsibility in providing public goods and economic development, especially in the education sector.

Some of the things mentioned above show a close and positive relationship between Investment and the average length of schooling and labor. In theory, Investment and education are essential instruments in absorbing sweat (Izekenova & Temirbekova, 2014).

LITERATURE REVIEW

Journal "The Influence of Investment on Labor Absorption in Pelalawan District Pekan Baru, Riau "October 2014, Karya Rudi Sofia Sandika Yusni Maulida Deny Setiawan. The results of the study said that (Suryani & Ramadhan, 2017):

1. Based on descriptive results, during the 2003-2012 period, Investment in Pelalawan Regency in 2003-2012 fluctuated every year. The contribution of Investment to opportunities did not increase significantly. Instead, it tended to decrease.
2. Partial testing shows that Investment has a positive and insignificant effect on job opportunities in Pelalawan Regency in 2003-2012. The variation of employment opportunities in Pelalawan Regency in 2003-2012, which was influenced by Investment, was 9.8%.

Investment or Investment plays a vital role for every business because, after all, Investment will create opportunities for economic actors to expand their business and improve production facilities, to increase output which in turn can boost more employment opportunities and greater profits and then the funds raised are rotated again for Investment. It is hoped that there will be a continuous increase in business (Grayson, 2011).

Based on the explanation above, several experts define Investment by the views of each expert, namely: According to (Lehner, 2013), "Investment can be interpreted as an expenditure or learning investment or a company to buy capital goods and production equipment. To increase the ability to produce goods and services available in the economy. According to (Farrell, Fry, & Risse, 2016), the types of Investment are grouped into 4 groups (aiming to avoid the type of Investment that falls into two groupings), including:

1. Based on the elements of national income:
a) Autonomous Investment
b) Induced Investment
2. By Subject:
a) Public Investment
b) Private
3. Based on the reasons:
a) Domestic Investment,
b) Foreign Investment,
4. Based on the elements of its formation:
a) Gross Investment
b) Net Investment

Average Years of School (RLS) / Mean Years School (MYS) is defined as the number of years used by the population undergoing formal education. RLS can be used to determine the quality of community education in an area (Whiteley, 2015).

The population who graduated from elementary school is taken into account for the length of schooling for 6 years, completing junior high school is calculated for the length of schooling for 9 years, completing high school is calculated for the length of schooling for 12 years regardless of whether or not they have lived in a class.

It is assumed that the average length of schooling for an area will not decrease. The population coverage calculated in calculating the average length of schooling is the population aged 25 years and over. To calculate the average length of the school, information is needed (Hanushek & Rivkin, 2010):

a) School participation
b) Level and type of education that has been/being attended
c) The highest certificate was held.
d) Highest level/class ever / being occupied.

The labor force is the number of workers in an economy in a particular country. To determine the workforce, two pieces of information are needed, namely as follows (Manan, 2019).

1. The number of over 15 years of age and do not want to work (examples are students, university students, housewives, and voluntary unemployed).
2. The number of people aged 15 years and over who enter the labor market (who already want to work). Group (2) is called the labor force, and the population in group (1) is called the non-labor force.

According to the Central Statistics Agency (Rahmawan & Oktora, 2018), Manpower is anyone who can do work to produce goods and or services both to meet their own needs and for the community. The working-age limit adopted by Indonesia is a minimum of 10 years, without a maximum age limit, so everyone or residents who are over 10 years old are classified as workers.

METHODOLOGY

Researchers used the literature study method in data collection by recording the required data directly, both at the Central Statistics Agency (BPS) Office of West Java Province and conducting a review of various literature such as books, journals, printed media, and related scientific reports. With the object of research.

The Investment referred to in this research is the total value of the investment realization of investment activities to do business in West Java Province in 2010-2018. This Investment is in physical form, which can be seen from one of the constituent components (Gross Regional Domestic Product) of GRDP based on constant prices according to expenditures released in 2010-2018. GRDP based on constant prices is chosen because it is assumed to show the real condition/value by looking at the total volume and is not influenced by prices.

In this study, the RLS is the population of West Java Province, which is calculated with the coverage of the population aged 25 years and

over. The population who graduated from elementary school is taken into account for the length of schooling for 6 years, and junior high school completion is calculated for the length of schooling for 9 years, completing high school is calculated for the length of schooling for 12 years regardless of whether or not they have lived in a class.

The Manpower referred to in this study refers to the BPS concept, namely economic activities carried out by a person (residents aged 15 years and over) to obtain or help to obtain income or profit, at least 1 hour (uninterrupted) in the past week. Meanwhile, labor absorption results from dividing the population aged 15 years and over who is working divided by the population aged 15 years and overmultiplied by 100%.

$$\text{Labor Absorption} = \frac{\text{Working population aged 15 years and over}}{\text{Total Population 15 years and over}} \times 100\%$$

RESULT AND DISCUSSION

The data analysis technique used is quantitative analysis, namely the method used to analyze data related to the effect of Investment and the average length of schooling on labor absorption in West Java Province, with the following equation:

$$Y = a + b\chi_1 + b\chi_2 + \mu$$

Where :

Y = Amount of Labor (in the soul)

χ_1 = The amount of Investment (in trillions of rupiah)

χ_2 = Average length of the school

b = Regression coefficient

μ = Term error

The resulting equation model will be used to discuss the effect of Investment and the average length of schooling on labor absorption in West Java Province. The period used (time series) is 2010 to 2018, using the Eviews 7.0 application program.

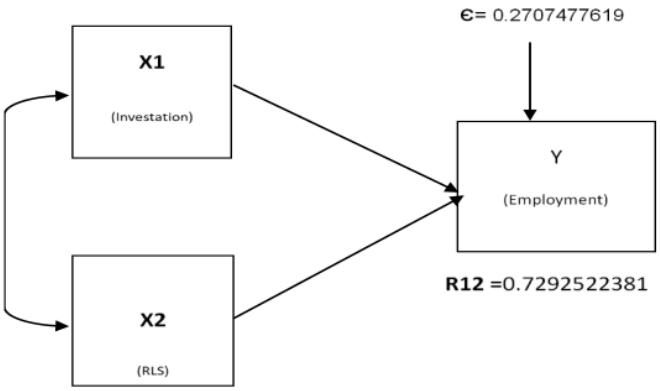


Figure 1. Chart of the Model of Investment and RLS on Labor Absorption in West Java Province 2013-2018

From the calculation, the results of the three variables above are obtained.

Dependent Variable: Y
Method: Least Squares
Date: 03/08/20 Time: 20:56
Sample: 2010 2018
Included observations: 9

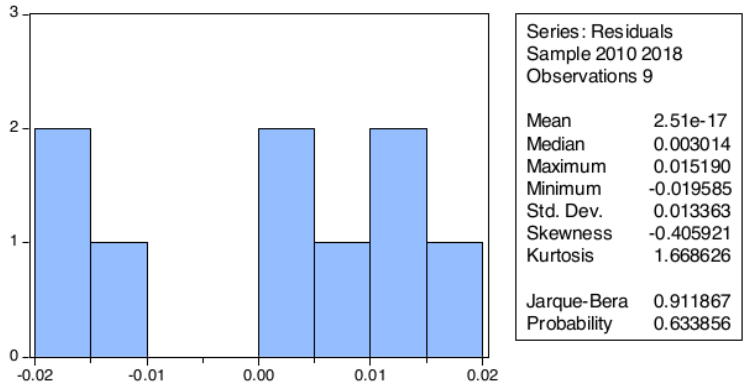
Table 1. Normality test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.1857717451	0.093732071	0.0175373645	0.0254763259
X2	0.0072436887	0.004745416	0.0165924678	0.0336661026
C	0.0154903353	0.044351846	0.1675215014	0.0287292970

R-squared	0.7806082153	Mean dependent var	0.5666666666
Adjusted R-squared	0.7292522381	SD dependent var	0.0141421356
SE of regression	0.0156796188	Akaike info criterion	1.2117085183
Sum squared resid	0.0014751026	Schwarz criterion	1.1459669925
Log-likelihood	26.452688332	Hannan-Quinn criteria.	1.3535785129
F-statistic	0.0254107520	Durbin-Watson stat	0.8205156916
Prob (F-statistic)	0.0483623484		

Based on the estimation model results, it can be interpreted as follows: Investment (X_1) has a positive effect on the rate of employment in West Java Province. This can be seen from the X coefficient$_1$(0.1857717451). This means that if investment increases by 1 trillion rupiahs, the rate of labor absorption in West Java Province will increase by 18.57717451%. This shows that Investment has a direct effect on employment. Then education is represented by the Average Length of School / RLS (X_2) has a positive effect on the rate of employment in West Java Province with a coefficient of 0.0072436887. This means that if RLS increases by 1%, the employment rate in West Java Province will increase by 0.72436887%.

Classical Regression Assumption Test



The decision is whether or not it is residual customarily distributed by merely comparing the calculated Jarque-Bera Probability value with the Alpha level. The value of the Jarque-Bera is 0.911867, with a probability of 0.633856. So it can be concluded that the probability of Jarque-Bera of 0.911867 is greater than Alpha 0.05. This means that the residuals are normally distributed.

Table 2. Autocorrelation Test (Serial Correlation)

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.36826226580	Prob. F (2)	0.3525723021196581
Obs * R-squared	3.65599808460	Prob. Chi-Square (2)	0.1607348698867603

The test results above show that the Prob Chi-Square (2) value is the p-value of the Breusch-Godfrey Serial Correlation LM test, which is equal to0.3525723021196581 where> 0.05, it means that there is no serial autocorrelation problem.

Table 3. Multicollinearity Test

Correlation		
	X1	X2
X1	1	0.3093754265318003
X2	0.3093754265318003	1

The multicollinearity test results showed no high correlation value between the independent variables not exceeding 0.9 (Ghozali, 2013: 83), or to be precise, 0.3093754265318003. So it can be concluded that there is no multicollinearity between independent variables.

Table 4. Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.01529628447570 48	Prob. F (2,6)	0.862115272984778 8
Obs * R-squared	0.83427181048469 44	Prob. Chi-Square (2)	0.804820582535736 7
Scaled explained SS	0.06452563118826 70	Prob. Chi-Square (2)	0.968252076891837 1

The output results above, where the Prob value indicates the p-value. Chi-square (2) on Obs * R-Squared is equal to 0.8342718104846944. Hence the p-value 0.8342718104846944 > 0.05 then accepts H_0 or means that the regression model is homoscedastic or there is no problem with the assumption of nonheteroscedasticity.

Table 5. Linearity Test

Ramsey RESET Test:

	0.81151092304585		
F-statistic	895	Prob. F (1.5)	0.918731786933974
Log-likelihood	0.90206958477816	Prob. Chi-Square	
ratio	741	(1)	0.8856106157309009

The linearity test above uses the Ramsey Reset Test, where the results can be seen at the p-value shown in the probability column of the F-statistics line. Based on the table above, it can be seen that the F-statistics value in the Ramsey Reset Test table is equal to0.81151092304585895, where> 0.05, so it can be concluded that the independent variable is linear with the dependent variable.

The T-test (partial test)

The t-test is an individual test to prove that the regression coefficient is statistically significant.

- H_0 = no investment effect on the rate of employment
  H_1 = there is an effect of Investment on the rate of labor absorption.
- H_0 = there is no effect of RLS on the rate of labor absorption.
- H_1 = there is an effect of RLS on the rate of labor absorption.
- H_0 = there is no effect of Investment and RLS on labor absorption.
- H_1 = there is an effect of Investment and RLS on labor absorption.

The criteria for acceptance or rejection are as follows:

- Reject H_0 if the probability value t <of the significant level is 0.05 (sig <0.05)
- Thank H_0 if the probability value t> from the significant level of 0.05 (sig> 0.05)

From the results of data processing, it is found that the probability value (sig) for Investment is 0.0254763259 (sig 0.0254763259 <0.05), thus H_0rejected and accepted H_1, which means that Investment has a significant effect on the rate of employment. Then the probability value (sig) for RLS is 0.0336661026 (sig 0.0336661026 <0.05); thus, H_0rejected and accepted H_1, which means that RLS has a significant effect on the rate of employment. While the value of the C coefficient is 0.0154903353, meaning that the investment variable (X_1) and RLS (X_2) has the same value as zero (0), it will increase the labor absorption rate by 1.54903353%.

R^2 Test (Determination Coefficient Test)

From the regression results of the effect of Investment and RLS on the rate of labor absorption in 2010-2018 in West Java Province simultaneously

(jointly), it is obtained an Adjusted R-squared value of 0.7292522381. This means that the influence of the investment variable (X_1) and RLS (X_2) to the labor absorption rate (Y) of 72.92522381%, while other variables outside this model explain the remaining 27.07477619%.

Simultaneous Test

A simultaneous test is used to see whether the independent variable (X_1 and X_2) influences the dependent variable (Y). This can be seen from the Prob (F-statistic) value of 0.0483623484 (sig 0.0483623484 <0.05), meaning that the two independent variables (Investment and RLS) simultaneously (together) have a significant influence on the variable. Dependent (labor absorption rate).

Weaknesses:

The regression model's weakness above is that it is assumed that conditions outside the variable are fixed (caters paribus) so that the independent variable only influences the dependent variable in the model.

CONCLUSION

Education represented by the Average Length of Schooling (RLS) should be improved through programs and policies that favor education so that the absorption rate of labor can be increased optimally. Improving the quality of education should be focused on improving the quality of human resources and life skills, which are directly related to employment in West Java Province. Labor-intensive Investment, which involves the people of West Java Province, should be optimized so that employment can be optimal.

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