

ANALYSIS OF THE EFFECT OF INVESTMENT, WAGE LEVELS, THE NUMBER OF INDUSTRIES ON EMPLOYMENT IN THE INDUSTRIAL SECTOR IN REGENCIES / CITIES IN EAST JAVA PROVINCE

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ABSTRACT

The purpose of this study was to determine the effect of investment, wage levels, and the number of industries on employment in the industrial sector in East Java Province. The research variables consist of the independent variable of investment, the level of wages, the number of large and medium industries, and the dependent variable of employment in the industrial sector. The research data consisted of time series data for 2017 - 2019 and cross section data of 38 districts / cities in East Java Province. Data analysis used panel data regression with the Ordinary Least Square (OLS) method followed by testing the hypothesis t-test. The results of the study conclude that investment has a significant positive effect on employment in the industrial sector, the level of wages has no significant negative effect on employment in the industrial sector, and the number of industries has a positive and insignificant effect on employment in the industrial sector. Therefore, the Regional Government of East Java Province should create a conducive investment climate, improve the real and proper wage system according to the needs of life, and encourage increased industrial growth.

Keywords: Labor; investment; wage; industry; panel data.

INTRODUCTION

Provision of employment is one of the goals of economic development where the growth of the workforce is greater than the growth of employment opportunities. The progress of economic development will be able to provide jobs so that it has an impact on employment, including East Java Province which is one of the provinces with the largest population in Indonesia. The large population has made East Java Province have an abundant workforce. This of course will be a problem in itself if this large workforce is not absorbed through the opening of job opportunities.

Labor absorption is the acceptance of labor to perform tasks (jobs) or a situation that describes the availability of jobs to be ready to be filled by job seekers. In general, the labor absorption shows how much a company absorbs labor to produce a product. The ability to absorb labor varies from sector to sector (Todaro, 2003). Several factors influence employment, one of which is investment.

Investment is the expenditure made by investors or companies to buy capital goods and production equipment in order to increase the ability to produce goods and services available in the economy. Investment allows people to continuously increase economic activity and job opportunities, national income and increase the level of community welfare (Sukirno, 2008). Investment is the beginning of economic development activities that can be carried out by the private sector, government or cooperation between the private sector and the government as a way to increase economic growth and in the long run can raise the standard of living of the community (Mankiw, 2003).

Apart from investment, one of the factors that is suspected to affect employment is the level of wages. Wages are workers / laborers' rights that are received and expressed in the form of money as remuneration from the entrepreneur or employer to workers / laborers who are determined and paid according to a work agreement, agreement, or statutory regulations, including allowances for the worker / laborer and their family for work. and / or services that have been or will be performed (Law No. 13 of 2003). Labor demand is a function of the wage rate. Wage increases can increase employment opportunities through increased consumption, however in some cases wage increases have a negative impact on labor absorption (Simanjuntak, 1998).

Wages play an important role in employment. Wages are one of the factors which, when viewed from the supply side of labor, affects the absorption of labor. An increase in wages will increase the welfare of workers in terms of income. However, from the perspective of business actors, the higher the level of wages offered to workers, this will reduce the absorption rate of labor. Because when wages are increased, many business actors will consider employing labor or reducing workers.

Apart from investment and wage rates, another factor related to employment is the number of industries. Industry is an economic activity that manages raw materials, raw materials, finished hand goods, and / or finished goods into goods with a higher value for their use, including industrial design and engineering activities. The definition of industry also includes all companies that have certain activities in mechanically or chemically changing organic materials so that they become new products (Law No. 5 of 1984).

The development of the industrial sector is considered as a sector capable of becoming leaders. Industrial products have a high selling value than other sectors, this is because industrial products are very diverse and provide high value and benefits to society. Industry is a helper for the economy of a country, one of which is the opening of jobs that lead to the absorption of labor in the industrial sector (Muslihatinningsih et al., 2019). The industrial sector, both large and medium industries, is a capital-intensive industry and has great potential in boosting the economy in East Java Province.

Capital-intensive industry and has great potential in boosting the economy in East Java Province. Empirical studies related to the effect of investment, wage levels, and the number of industries on labor absorption have been carried out by Suiroh et al. (2016), Muhtamil (2017), and Muslihatinningsih et al. (2019) in their respective research concluded that investment has a positive and significant effect on labor absorption. Feriyanto et al (2016), which proxies investment into foreign investment and domestic investment, show that foreign investment and domestic investment each have a positive and significant effect on labor absorption. Regarding the effect of wage levels on labor absorption, Suiroh et al. (2016) concluded that the Regional Minimum Wage (UMR) has a negative and significant effect on labor absorption; Habanabakize et al (2019) mentioning real wages have a negative and significant effect on employment absorption rate; Pramusinto et al. (2020) concluded that labor wages have a negative and significant effect on labor absorption, and Feriyanto et al (2016) stated that minimum wage has a negative and significant effect on labor absorption. A study of the effect of the number of industries on labor absorption was presented by Nunung (2018) who proxied the number of industries with the number of companies concluded in his research that the number of companies had a positive and significant effect on employment in the industrial sector; Pramusinto et al. (2020) concluded that the number of industrial companies has a positive and significant effect on labor absorption, and Muhtamil (2017) who proxies the number of industries with business units states that there is a significant positive effect of business units on labor absorption.

These explanations imply an understanding of the effect of investment, wage levels, and the number of industries on labor absorption. Therefore, the purpose of this study is to determine the effect of each investment, wage level, number of industries on employment in the industrial sector in the Regency / City in East Java Province in 2017 - 2019.

LITERATURE REVIEW

Labor absorption is defined as the amount of labor absorbed in a sector in a certain time (Rahardjo, 1984). Labor absorption is the acceptance of labor to perform tasks (jobs) or a situation that describes the availability of jobs to be ready to be filled by job seekers. Labor absorption shows how much a company absorbs labor to produce a product (Todaro, 2003). Labor absorption is also the number of jobs that have been filled as reflected in the large number of working people caused by the demand for labor. Therefore, labor absorption can be said as a demand for labor (Kuncoro, 2002).

Demand for labor is influenced by several factors, including changes in wage levels, an increase in demand for production products, and the labor market (Sumarsono, 2009). Labor demand is related to the number of workers required by the company or agency as a whole. The amount of labor demanded in the labor market is determined by factors such as: wage levels, technology, productivity, quality of labor, capital facilities, gross regional domestic product, and interest rates (Haryani, 2002).

In the context of the relationship between investment and employment, investment activities allow a society to continuously increase economic activity and employment opportunities, increase national income and increase the level of community welfare (Sukirno, 2008) to increase production capacity, increase national income and create new jobs (Tadoro, 2003). Investment is part of the capital facility, the greater the capital invested, the greater the demand for labor. Capital facilities are generally referred to as investment or investment, originating from 2 (two) sources, namely: Foreign Investment or Foreign Investment (PMA) and Domestic Investment or Domestic Investment (PMDN) (Haryani, 2002).

Several empirical studies also state that there is a relationship between investment and labor absorption, namely investment has a positive and significant effect on labor absorption (Suiroh et al., 2016; Muhtamil, 2017, Muslihatinningsih et al., 2019). Investments that are proxied by foreign investment and domestic investment each have a positive and significant effect on labor absorption (Feriyanto et al., 2016).

Furthermore, the relationship between the wage rate and labor absorption states that the wage rate will affect the level of the company's production costs. High production costs increase the price of the product which in turn reduces the demand for the product (Haryani, 2002). Employers consider wages as a burden, because the profits earned by entrepreneurs depend on the level of wages issued. The greater the wage level, the smaller the profits the entrepreneur will get. Therefore, employers will reduce their workforce when wages increase (there is an increase in wages) (Simanjuntak, 1998). The quantity of labor demanded will decrease as a result of the increase in wages (Kuncoro, 2002). An increase in the average wage rate will be followed by a decrease in the number of workers demanded and conversely a decrease in the wage rate will be followed by an increase in job opportunities, so it can be said that job opportunities have an inverse relationship with the wage level (Ehrenbeg, 1998).

Hasil kajian empiris juga menyebutkan pengaruh tingkat upah dengan penyerapan tenaga kerja, antara lain menyebutkan bahwa Upah Minimum Regional (UMR) berpengaruh negatif signifikan terhadap penyerapan tenaga kerja (Suiroh et al., 2016), *real wages* berpengaruh negatif dan signifikan terhadap *employment absorption rate* (Habanabakize et al., 2019) *labor wages* berpengaruh negatif dan signifikan terhadap *labor absorption* (Pramusinto et al, 2020) dan *minimum wage* berpengaruh negatif dan signifikan terhadap *labor absorption* (Feriyanto et al., 2016).

Meanwhile, the effect of the number of industries on labor absorption is indicated by the statement that labor absorption shows how much a company absorbs labor to produce a product. The ability to absorb labor varies from sector to sector (Todaro, 2003). Industrial products have a high selling value than other sectors, this is because industrial products are very diverse and provide high value and benefits to society. Industry is a helper for the economy of a country, one of which is the opening of jobs that lead to the absorption of labor in the industrial sector (Muslihatinningsih et al., 2019).

The results of an empirical study which states the effect of the number of industries on labor absorption, among others, states that the number of industries that are proxied by the number of companies has a positive and significant effect on employment in the

industrial sector (Nunung, 2018). Number of industrial companies has a positive and significant effect on labor absorption (Pramusinto et al., 2020). There is a significant positive effect of business units as a proxy for the number of industries on labor absorption (Muhtamil, 2017).

Relationship of Wage Level (UMR) with Labor Absorption in the Industrial Sector

The linkage of investment with labor absorption, investment activities allow a society to continuously increase economic activity and job opportunities, increase national income and increase the level of community welfare (Sukirno, 2008) to increase production capacity, increase national income and create new jobs (Tadoro, 2003).). The results of the empirical study also state that there is a relationship between investment and labor absorption, namely investment has a positive and significant effect on labor absorption (Suiroh et al., 2016; Muhtamil, 2017, Muslihatinningsih et al., 2019). Investments that are proxied by foreign investment and domestic investment each have a positive and significant effect on labor absorption (Feriyanto et al., 2016).

Relationship of Wage Level (UMR) with Labor Absorption in the Industrial Sector

The relationship between the wage level and labor absorption states that the wage rate will affect the level of the company's production costs. High production costs increase the price of the product which in turn reduces the demand for the product (Haryani, 2002). Employers consider wages as a burden, because the profits earned by entrepreneurs depend on the level of wages issued. The greater the wage level, the smaller the profits the entrepreneur will get. Therefore, employers will reduce their workforce when wages increase (there is an increase in wages) (Simanjuntak, 1998). An increase in the average wage rate will be followed by a decrease in the number of workers demanded and conversely a decrease in the wage rate will be followed by an increase in job opportunities, so it can be said that job opportunities have an inverse relationship with the wage level (Ehrenbeg, 1998). Several empirical studies state that the Regional Minimum Wage (UMR) has a significant negative effect on labor absorption (Suiroh et al., 2016), real wages have a negative and significant effect on employment absorption rate (Habanabakize et al., 2019) labor wages have a negative effect and is significant for labor absorption (Pramusinto et al., 2020) and minimum wage has a negative and significant effect on labor absorption (Feriyanto et al., 2016).

The Relationship between Number of Industries and Employment in the Industrial Sector

Labor demand is related to the number of workers required by the company or agency as a whole. The amount of labor demanded in the labor market is determined by factors such as: wage levels, technology, productivity, quality of labor, capital facilities, gross regional domestic product, and interest rates (Haryani, 2002). Labor absorption is how much a company absorbs labor to produce a product (Todaro, 2003). Industrial products have a high selling value than other sectors, this is because industrial products are very diverse and provide high value and benefits to society. Industry is a helper for the economy of a country, one of which is the opening of jobs that lead to the absorption of labor in the industrial sector (Muslihatinningsih et al., 2019). The results of empirical studies state that the number of industries that are proxied by the number of companies has a positive and significant effect on employment in the industrial sector (Nunung, 2018). Number of industrial companies has a positive and significant effect on labor absorption (Pramusinto et al., 2020). There is a significant positive effect of business units as a proxy for the number of industries on labor absorption (Muhtamil, 2017).

METHODS

This study aims to determine the effect of investment, wage levels, and the number of industries on employment in the industrial sector in East Java Province. The research variables include the independent variable investment (INV), the level of wages (UMR), the number of large and medium industries (IND) and the dependent variable Industrial Sector Labor Absorption (PTK). The data analysis method uses panel data regression analysis using the Ordinary Least Square (OLS) method because the research data is a combination of time series data and cross section data. Time series data are investment variable data (INV), wage rate (UMR), and number of industries (IND), and industrial sector employment (PTK) respectively for the 2017 - 2019 period, while the cross-section data is 38 Regency / City in East Java Province. Thus, the total panel (balanced) observations are 114 data units.

The implementation of panel data regression analysis was carried out using the help of the Eviews 9 program by first doing the Augmented Dickey Fuller (ADF) data stationarity test at the level and 1st difference (first difference). Estimation of the regression model equation is done in the stages of estimating the Common Effect (CE) model, the Fixed Effect (FE) model, and the Random Effect (RE) model. The most appropriate model choice is determined based on the parameters of the Chow Test, Hausman Test and Lagrange Multiplier (LM) Test. The selected panel data regression model then carried out the feasibility test of the F-test model, the coefficient of determination (R²), and testing the classical assumptions including the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Hypothesis testing is carried out using the t-test significance test (Ghozali, 2013).

RESULTS

Data Stationarity Test

The results of the data stationarity test at the level level showed that the results were not stationary, so it was followed by Augmented Dickey Fuller (ADF) at the 1st difference level.

Tabel 1. Data Stationarity Test Results

Method	Statistic	Prob.**
ADF - Fisher Chi-square	110.926	0.0000
ADF - Choi Z-stat	-9.14773	0.0000

The results of data stationarity processing show the probability value is smaller than α (0.05). This provides an understanding that at the level of 1st difference (first difference) the research data is stationary so that each research variable is able to generalize to other time periods and the forecasting objectives with time series data are of good value.

Panel Data Regression Model Estimation

Panel data model estimation is done using three models, namely, the Common Effect (CE) model, the Fixed Effect (FE) model, and the Random Effect (RE) model.

Common Effect Model (CE)

The first step to estimating panel data regression is to calculate the Common Effect (CE) regression model.

Tabel 2. Common Effect Model (CE)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.971182	0.382046	10.39453	0.0000
LOG(INV)	0.973649	0.010723	90.79763	0.0000
UMR	0.003292	0.026415	0.124630	0.9010
LOG(IND)	0.004329	0.006719	0.644313	0.5207

Fixed Effect Model (FE)

The second step in estimating panel data regression is to calculate the Fixed Effect (FE) model regression.

Tabel 3. Fixed Effect Model (FE)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.046681	0.922708	4.385655	0.0000
LOG(INV)	0.668754	0.115972	5.766526	0.0000
UMR	0.038888	0.054986	0.707240	0.4817
LOG(IND)	0.387032	0.122463	3.160399	0.0023

Random Effect Model (RE)

The final step in estimating panel data regression is to calculate the Random Effect (RE) regression model.

Tabel 4. Random Effect Model (RE)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.971182	0.379995	10.45063	0.0000
LOG(INV)	0.973649	0.010666	91.28769	0.0000
UMR	0.003292	0.026273	0.125303	0.9005
LOG(IND)	0.004329	0.006683	0.647790	0.5185

Panel Data Regression Model Selection

The selection of panel data regression model to be used in this study will first be carried out the Chow test, Hausman test, and the Lagrange Multiplier (LM) test. Each of these tests is intended to determine the panel data regression model which will be most appropriate to predict the effect of the independent variable investment (INV), wage rate (UMR), and industry (IND) on the dependent variable Industrial Sector Labor Absorption (PTK) in East Java Province.

Chow Test

The Chow test is used to determine the choice between panel data regression techniques with the Fixed Effect (FE) method and panel data model regression without dummy variables or the Common Effect (CE) method.

Tabel 5. Chow Test

Redundant Fixed Effects Tests
Equation: FIXED_EFFECT
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.032178	(37,73)	0.0443
Cross-section Chi-square	47.969647	37	0.0106

The results of Chow test processing show that the probability value of F test and Chi-square is significant ($0.0000 < 0.05$) which means rejecting H_0 and accepting H_a . Thus, the Fixed Effects (FE) model is better than the Common Effects (CE) model.

Hausman Test

The Hausman test is used to determine the best model choice between the Fixed Effect (FE) or Random Effect (RE) models

Tabel 6. Hausman Test

Equation: RANDOM_EFFECT
Test cross-section random effects

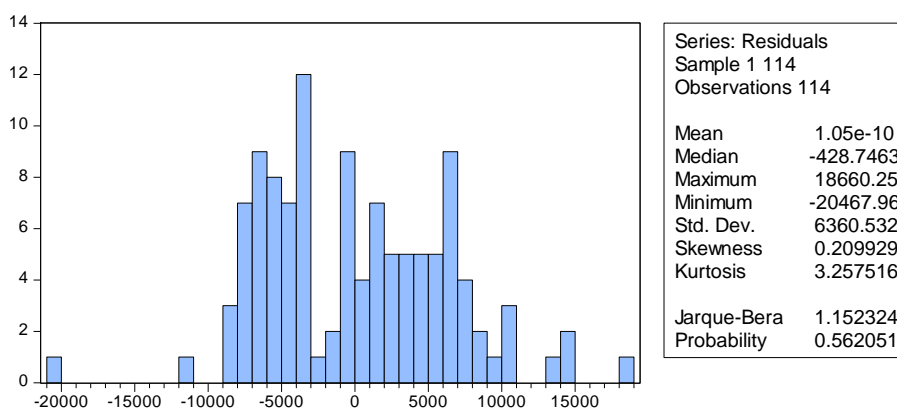
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	13.554893	3	0.0036

The Hausman test has a probability of random cross-section smaller than α ($0.0011 < 0.05$) which means that H_0 is rejected and H_a is accepted. Thus the Fixed Effects (FE) model is better than the Random Effects (RE) model. The processing results of the Chow test and the Hausman test show that the most appropriate panel data regression model is the Fixed Effect (FE) model to predict the effect of Investment (INV), Wage Level (UMR), and Industry (IND) on Industrial Sector Labor Absorption. (PTK) in East Java Province. Therefore, it is no longer necessary to perform the Lagrange Multiplier (LM) test.

Classic assumption test

Normality test

The normality test in this study used the Jarque-Bera (JB) test by looking at the probability value.



Gambar 2. Uji Normalitas Jarque-Bera (JB)

The normality test with the Jarque-Bera (JB) test shows the Jarque-Bera probability value is greater than the significance level ($0.562051 > 0.05$). This means that it does not reject H_0 or the residual has a normal distribution or the research data has met the classic assumptions of normality.

Multicollinearity Test

Multicollinearity test is a condition of a linear relationship between independent variables in panel data regression. To see the presence or absence of multicollinearity symptoms by looking at the correlation matrix value.

Tabel 7. Multicollinearity Test

	LOG(INV)	UMR	LOG(IND)
LOG(INV)	1	0,2982990	0,4710571
UMR	0,2982990	1	0,6896669
LOG(IND)	0,4710571	0,6896669	1

The result of multicollinearity test processing shows that the correlation test value between the independent variables has a correlation coefficient value < 0.85 . This means that H_0 does not reject or multicollinearity problems do not occur. Therefore it can be concluded that the independent variables do not contain a linear dependency relationship or the model does not experience multicollinearity symptoms.

Heteroscedasticity Test

This test aims to analyze whether the variance of the error is fixed (homoscedastic) or variable (heteroscedastic). White test was used to detect the presence or absence of heteroscedasticity.

Tabel 8. White Method Heteroscedasticity Test

Heteroskedasticity Test: White

F-statistic	3.126828	Prob. F(3,110)	0.0687
Obs*R-squared	8.957705	Prob. Chi-Square(3)	0.0699
Scaled explained SS	9.413979	Prob. Chi-Square(3)	0.0643

The results of processing the heteroscedasticity test using the White test showed the probability value of chi squares of 0.0699. The value of the chi squares probability is greater than the significance level ($0.0699 > 0.05$), which means that it does not reject H_0 or heteroscedasticity does not occur.

Autocorrelation Test

The autocorrelation test aims to test whether in a linear regression model there is a correlation between all confounders (residuals) in period t with errors in period $t-1$ (previous). The autocorrelation test used in this study uses the Lagrange Multiplier test (LM Test) or also known as the Breusch-Godfrey test.

Tabel 9. Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	15.50383	Prob. F(2,108)	0.7256
Obs*R-squared	25.42935	Prob. Chi-Square(2)	0.6897

The results of the Breusch-Godfrey Serial Correlation LM Test autocorrelation test showed the probability value of chi squares $Obs * R^2$ was greater than the significance level ($0.6897 > 0.05$), meaning that it did not reject H_0 or the data in this study were not affected by autocorrelation.

Model Feasibility Test

Previous tests have shown that the Fixed Effects (FE) model is the selected panel data regression model and also meets the requirements of the classical assumption test. The feasibility level testing is done using the F-test.

Tabel 10. Selected Model Panel Data Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.046681	0.922708	4.385655	0.0000
LOG(INV)	0.668754	0.115972	5.766526	0.0000
UMR	0.038888	0.054986	0.707240	0.4817
LOG(IND)	0.387032	0.122463	3.160399	0.0023
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.993675	Mean dependent var		11.21982
Adjusted R-squared	0.990209	S.D. dependent var		0.499664
S.E. of regression	0.049441	Akaike info criterion		-2.902514
Sum squared resid	0.178442	Schwarz criterion		-1.918442
Log likelihood	206.4433	Hannan-Quinn criter.		-2.503134
F-statistic	286.7107	Durbin-Watson stat		1.732726
Prob(F-statistic)	0.000000			

The interpretation of the multiple linear regression equation built from the selected model is as follows:

$$PTK = 4,046681 + 0,668754*\ln(INV) - 0,038888*UMR + 0,387032*\ln(IND)$$

The multiple linear regression equation above explains things as follows:

- 1) A constant of 4.046681 indicates that if there is no Investment variable (INV), Wage Level (UMR), and Number of Industry (IND) or if the independent variable is zero then the Industrial Sector Labor Absorption (PTK) is 4.046681.
- 2) The regression coefficient for the Investment variable (INV) is 0.668754. This means that each increase of one investment unit (INV) will have an effect on an increase in the Industrial Sector Labor Absorption (PTK) of 0.668754 with the assumption that the Wage Level (UMR) and Number of Industry (IND) variables are constant (zero).
- 3) The wage rate variable regression coefficient (UMR) is 0.038888. This means that each increase of one unit of Wage Rate (UMR) will have an effect on the increase in Industrial Sector Labor Absorption (Y) of 0.038888 with the assumption that the Investment variable (INV) and the Number of Industry (IND) are constant (zero).
- 4) The regression coefficient for the number of industries (IND) variable is 0.387032. This means that each increase of one unit of Total Industry (IND) will have an effect on the increase in Labor Absorption (Y) of 0.387032, assuming that the Investment variable (INV) and the Wage Level (UMR) are constant (zero).

The feasibility test of the panel data regression model is reflected in the results of the F-test, which shows that the F-statistic probability value is smaller than the significance level ($0.0000 < 0.05$). This gives an understanding that H_0 is rejected or the Fixed Effect (FE) model is quite feasible to be used to measure the effect of Investment (INV), Wage Level (UMR), and Industry (IND) on Industrial Sector Labor Absorption (PTK) in East Java Province.

Coefficient of Determination (R^2)

The coefficient of determination (R square) is useful for predicting the contribution of the joint influence of the Investment variable (INV), Wage Level (UMR), and Industry (IND) on the Labor Absorption in the Industrial Sector (PTK) in East Java Province.

Tabel 11. Coefficient of Determination (R²)

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.993675	Mean dependent var	11.21982
Adjusted R-squared	0.990209	S.D. dependent var	0.499664
F-statistic	286.7107	Durbin-Watson stat	1.732726
Prob(F-statistic)	0.000000		

The calculation result of the coefficient of determination (R²) shows that the R-squared (R²) value is 0.994 while the Adjusted R-squared is 0.990. This means that the contribution of the Investment variable (INV), Wage Level (UMR), and Industry (IND) to the Employment Absorption in the Industrial Sector (PTK) in East Java Province is 99%, while the remaining 1% is influenced by other variables. which were not measured in this research model. The calculation result of the coefficient of determination (R²) shows that the R-squared (R²) value is 0.994 while the Adjusted R-squared is 0.990. This means that the contribution of the Investment variable (INV), Wage Level (UMR), and Industry (IND) to the Employment Absorption in the Industrial Sector (PTK) in East Java Province is 99%, while the remaining 1% is influenced by other variables. which were not measured in this research model.

Hypothesis test

The hypothesis in this study states the influence of each independent variable of investment (INV), wage rate (UMR), and number of industries (IND) on the absorption of labor in the industrial sector (PTK) in East Java Province. Hypothesis testing is done by using the t-test with the criteria for decision making is done by comparing the probability value t (prob.) With the level of significance ($\alpha = 0.05$). If the probability value of t (prob.) Is smaller than the level of significance (α), then each independent variable has a significant effect on the dependent variable. Conversely, if the probability value of t (prob.) Is greater than the level of significance (α), then independently (partially) the independent variable does not have a significant effect on the dependent variable. Tabel 12. Ikhtisar Pengujian Hipotesis

Hypot hesis	Description	Coefficient Regresi	Prob. t	Test Evidence	Decision
H ₁	Investment (INV) has a positive and significant effect on Labor Absorption in the Industrial Sector (PTK)	0.668754	0,0000	0,000 < 0,05 (Sig. < α)	Significant Positive Influence
H ₂	The Wage Level (UMR) has a positive and significant effect on Labor Absorption in the Industrial Sector (PTK)	0.038888	0,4817	0,4817 > 0,05 (Sig. > α)	The Negative Effect is Insignificant
H ₃	Number of Industry (IND) has a positive and significant effect on Labor Absorption in the Industrial Sector (PTK)	0.387032	0,0023	0,0023 > 0,05 (Sig. > α)	Positive Influence is Not Significant

Summary of the results of hypothesis testing as in the table above, it can be described as follows.

Hypothesis test I

Hypothesis I in this study states that there is a significant effect of investment (INV) on the absorption of industrial sector labor (PTK) in regencies / cities in East Java Province. The results of the t-test show that the probability value of t (prob.) Is 0,000 or less than the level of significance (0,000 < 0,05). This means that there is a significant effect of investment (INV) on the absorption of labor in the industrial sector (PTK). Thus the research hypothesis which says there is a significant effect of investment (INV) on the absorption of labor in the industrial sector (PTK) in the Regency / City of East Java Province can be accepted or verified.

Hypothesis test II

Hypothesis II in this study states that there is a significant effect of the Wage Level (UMR) on the Absorption of Industrial Sector Labor (PTK) in Regency / City in East Java Province. The results of the t-test show that the probability value of t (prob.) Is 0.4817 or greater than the level of significance (0.4817 > 0.05). This means that there is no significant effect of the Wage Level (UMR) on the Labor Absorption in the Industrial Sector (PTK). Thus the research hypothesis which states that there is a significant effect of the Wage Level (UMR) on the Absorption of Industrial Sector Labor (PTK) in the Regency / City of East Java Province cannot be accepted or the truth is untested.

Hypothesis test III

Hypothesis III in this study states that there is a significant effect of the number of industries (IND) on the absorption of labor in the industrial sector (PTK) in regencies / cities in East Java Province. The t-test results show that the probability value of t (prob.) Is 0.0023 or less than the level of significance ($0.0023 > 0.05$). This means that there is a significant influence on the Total Industry (IND) variable on the Industrial Sector Labor Absorption (PTK). Thus the research hypothesis which says there is a significant effect of the number of industries (IND) on the absorption of labor in the industrial sector (PTK) in the regencies / cities in East Java Province can be accepted or verified.

CONCLUSION

Effect of Investment on Labor Absorption in the Industrial Sector

The results of this study conclude that there is a positive and significant effect on the Labor Absorption in the Industrial Sector (PTK) in the Regency / City in East Java Province. The results of this study are consistent with the results of research by Suiroh et al. (2016), Muhtamil (2017), and Muslihatinningsih et al. (2019) who concluded in their research that investment has a positive and significant effect on labor absorption. This is also in line with the results of research by Feriyanto et al (2016) which proxies' investment into foreign investment and domestic investment, both of which show a positive and significant effect on labor absorption.

Meanwhile the results of this study are not in line with the research results of Pramusinto et al. (2020) which states that investment value has a negative and insignificant effect on labor absorption, as Latipah et al. (2017) with the results of their research on large industries that the investment value has a negative and significant effect on labor absorption in large industries. The results of this study are also not in line with the results of research by Habanabakize et al (2019) which concluded in their research that investment spending has a positive and insignificant effect on employment absorption rate.

The results of the research that indicate the existence of a positive and significant influence of investment on labor absorption above are in line with the opinion which states that one of the factors affecting labor absorption is capital facilities, which in an industry, assuming other production factors are constant. , then the greater the capital invested, the greater the demand for labor. Capital facilities or commonly referred to as investment or investment, come from 2 (two) sources, namely foreign investment or foreign investment (PMA) and domestic investment or domestic investment (PMDN) (Haryani, 2002).

Domestic Investment (PMDN) is the use of the assets of the Indonesian people, including rights and property owned by the state or national private or foreign private companies domiciled in Indonesia (Suyatno, 2003). Law number 6 article 1 of 1968 the definition of Domestic Investment is part of the wealth of the Indonesian people, either directly or indirectly, including rights and objects, both owned by the state or national private sector or by foreign private companies who are domiciled. in Indonesia, set aside for running a business according to or based on the provisions of this Law (Law No.6 of 1968).

The results of the research that indicate the existence of a positive and significant influence of investment on labor absorption above are in line with the opinion which states that one of the factors affecting labor absorption is capital facilities, which in an industry, assuming other production factors are constant. , then the greater the capital invested, the greater the demand for labor. Capital facilities or commonly referred to as investment or investment, come from 2 (two) sources, namely foreign investment or foreign investment (PMA) and domestic investment or domestic investment (PMDN) (Haryani, 2002).

Meanwhile, foreign investment (PMA) is a flow of capital flows from abroad that flows to the private sector, either through direct investment or indirect / portfolio investment (Suyatno, 2003). Law No. 11 of 1970 PMA is foreign investment which includes foreign direct investment which is used to carry out projects in Indonesia, in this case the owner of the capital directly bears the risk of the investment. PMA is an investment that involves investors directly in the business operations carried out, so that business dynamics concerning the dynamics of the company being set, the goals to be achieved, cannot be separated from interested parties / foreign investors (Purnomo & Ambarsari, 2005: 28).

This opinion is also reinforced by the opinion that investment activities allow a society to continuously increase economic activity and job opportunities, increase national income and increase the level of community welfare. This role comes from one of the important functions of investment activities, namely investment is one of the components of aggregate expenditure, so that an increase in investment will increase aggregate demand, national income and job opportunities (Sukirno, 2002). Investment has an important role in driving the economic life of the nation, because the formation of capital increases production capacity, increases national income and creates new jobs or expands job opportunities (Tadoro, 2003). With the opening of new job opportunities or new employment opportunities, it is certain that there will be an increase in employment.

Effect of Wage Level (UMR) on Labor Absorption in the Industrial Sector

The results of this study concluded that the Wage Level (UMR) had a negative and insignificant effect on the Labor Absorption in the Industrial Sector (PTK) in Regency / City in East Java Province. The results of this study are consistent with the results of the study of Latipah et al. (2017), Nunung (2018), and Muslihatinningsih et al. (2019) who concluded in their research that the level of wages, each proxied by the Regional Minimum Wage (UMR) and the Regency Minimum Wage (UMK), has no significant effect on employment in the industrial sector.

Meanwhile the results of this study are inconsistent with the results of the study by Suiroh et al. (2016) who concluded in their research that the Regional Minimum Wage (UMR) has a significant negative effect on labor absorption. Halmana, the results of this study also do not support the results of other studies such as the results of research by Habanabakize et al (2019) which states that real wages have a negative and significant effect on employment absorption rate and also do not support the results of

Pramusinto et al. (2020) who concluded that labor wages have a negative and significant effect on labor absorption or research by Feriyanto et al (2016) which states that minimum wage has a negative and significant effect on labor absorption.

Wage increases can increase employment opportunities through increased consumption, however in some cases wage increases have a negative impact on labor absorption (Simanjuntak, 1998). An increase in the average wage rate will be followed by a decrease in the number of workers demanded, meaning that there will be unemployment. Vice versa, with a decrease in the wage rate will be followed by an increase in job opportunities, so that it can be said that job opportunities have an inverse relationship with the wage level (Ehrenbeg, 1998).

The amount of labor absorbed is influenced by the real wage rate. According to the labor demand theory, the quantity of labor demanded will decrease as a result of the increase in wages. If the wage level increases, while other inputs are constant, it means that the price of labor is relatively more expensive than other inputs. This situation encourages entrepreneurs to reduce the use of labor which is relatively expensive with other inputs which are relatively cheaper in order to maintain maximum profits (Kuncoro, 2002). Wages are one of the factors which, when viewed from the supply side of labor, affects the absorption of labor. An increase in wages will increase the welfare of workers in terms of income. However, in terms of business actors, the higher the level of wages offered to workers, this will reduce the absorption rate of labor (Sumarsono, 2003).

The Influence of Number of Industries on Labor Absorption in the Industrial Sector

The results of this study concluded that the number of industries (IND) had a positive and insignificant effect on the absorption of labor in the industrial sector (PTK) in regencies / cities in East Java Province. The results of this study are consistent with the results of research by Suiroh et al. (2016) who concluded in their research that industrial growth had no significant effect on labor absorption. On the other hand, the results of this study are also consistent with the results of the study by Latipah et al. (2017) which states that business units have a positive and insignificant effect on labor absorption in large industries. The results of this study are also in line with the results of research by Muda et al (2017), which examined industry by distinguishing between large and medium industries, each of which showed that there was an insignificant effect both large and medium industries had no significant effect on absorption of the number. of workers.

Meanwhile, the results of this study are not consistent with the results of research by Nunung (2018) which proxies the number of industries with the number of companies, concluding that there is a significant positive effect of the number of companies on employment in the industrial sector, Pramusinto et al. (2020) who concluded that the number of industrial companies has a positive and significant effect on labor absorption. Furthermore, the results of this study also do not support the results of Muhtamil's (2017) study which states that business units have a significant positive effect on labor absorption.

The development of the industrial sector is considered as a sector capable of becoming leaders. Industrial products have a high selling value than other sectors, this is because industrial products are very diverse and provide high value and benefits to society. Industry is a helper for the economy of a country, one of which is the opening of jobs that lead to the absorption of labor in the industrial sector (Muslihatinningsih et al., 2019). Labor absorption shows how much a company absorbs labor to produce a product. The ability to absorb labor varies from sector to sector (Todaro, 2003).

The industrial sector itself is often referred to as the leading sector. This is because the presence of industrial development will spur and lift the development of other sectors such as the agricultural sector and the service sector. The rapid industrial growth will stimulate the agricultural sector to provide raw materials for industry. The service sector has also developed with the establishment of financial institutions, marketing institutions, and so on, all of which will support the pace of industrial growth (Arsyad, 2014).

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

On the basis of the explanations that have been presented in the previous chapter, the following conclusions can be drawn: (1) investment has a positive and significant effect on labor absorption in the industrial sector (2) the wage level (UMR) has a negative and insignificant effect on Labor Absorption Industrial Sector; and (3) the number of Industries has a positive and insignificant effect on Labor Absorption in the Industrial Sector.

Suggestions are given that the Regional Government of East Java Province should create a conducive investment climate, improve the wage system by establishing a wage policy based on Decent Living Needs (KHL) which is truly real and feasible, and make efforts to encourage increased industrial growth labor intensive with human labor.

The limitation of this research is that the observation period is still short and namely three years and only three independent variables are used to predict the absorption of labor in the industrial sector. Therefore, it is hoped that the next research can add to the observation period and variables such as GRDP, production, technology and so on.

REFERENCE

- Ehrenberg, G. R. (1998). *Modern Labour Economic*. Scoot and Foresman Company.
- Feriyanto, N., and Sriyana J. (2016). Labor absorption under minimum wage policy in Indonesia. *Regional Science Inquiry*, Vol. VIII, (1), 2016, pp. 11-21.
- Ghozali, Imam. (2013). *Aplikasi Analisis Multivariate dengan Program*. Edisi Ketujuh. Semarang: Badan Penerbit UNDIP.
- Habanabakize, T., Meyer, D.F., and Oláh, J. (2019). The Impact of Productivity, Investment and Real Wages on Employment Absorption Rate in South Africa. *Journal Social Sciences* 8, 330. Published 11 December 2019. p.1-15.
- Haryani, S. (2002). *Hubungan Industrial di Indonesia*. Yogyakarta: UPP AMP YKPN.

- Kuncoro, H. (2002). Upah Sistem Bagi Hasil dan Penyerapan Tenaga Kerja. *Jurnal Ekonomi Pembangunan. Kajian Ekonomi Negara Berkembang*, Vol. 7 No. 1, 2002. p.45-54.
- Latipah, N.S., dan Inggit, K. (2017). Analisis Penyerapan Tenaga Kerja Pada Sektor Industri Besar di Provinsi Jawa Timur Tahun 2009 – 2015. *JEB 17. Jurnal Ekonomi & Bisnis*, Volume 2, Nomor 2, September 2017. Hal 479 - 492
- Mankiw, G. N. (2003). *Pengantar Ekonomi*. Terjemahan oleh Munandar dan Kristiaji. Jakarta: Erlangga.
- Muda, I., Nasution, R.B., Erlina, Siregar, H.S., and Katircioglu, S. (2017). The Effect of The Existence of Large and Medium Industries on The Absorption of Labor in Sumatera Utara. *Atlantis Press: Advances in Economics, Business and Management Research (AEBMR)*, volume 46, 1st Economics and Business International Conference (EBIC) 2017.
- Muhtamil. (2017). Pengaruh Perkembangan Industri Terhadap Penyerapan Tenaga Kerja di Provinsi Jambi. *Jurnal Perspektif Pembiayaan dan Pembangunan Daerah* Vol. 4 No. 3, Januari - Maret 2017. p.199-206.
- Muslihatinningsih, F. dan Kusumasari, K. (2019). Penyerapan Tenaga Kerja Pada Sektor Industri Pengolahan. *Journal Ekuiilibrium*, 2019, Volume III (2): p.77-82.
- Nunung, Nur Roh. (2018). Analisis Penyerapan Tenaga Kerja Sektor Industri di Jawa Tengah Tahun 2011 – 2015. Skripsi. Fakultas Ekonomi Universitas Islam Indonesia Yogyakarta.
- Pemerintah RI. Undang-Undang No. 13 Tahun 2003. Tentang Ketenagakerjaan. <http://www.hukor.depkes.go.id> diakses 1 Januari 2020.
- Pemerintah RI. Undang-Undang No. 5 Tahun 1984 Tentang Perindustrian. <http://www.bplhd.jakarta.go.id> diakses 1 Januari 2020.
- Pramusinto, N.D. and Daerobi, A. (2020). Labor Absorption of the Manufacturing Industry Sector in Indonesia. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Vol. 3, No 1, February 2020, Page: 549-561.
- Simanjuntak, P. J. (1998). Masalah Ketenagakerjaa Di Indonesia. Departemen Tenaga Kerja RI, Jakarta.
- Suiroh, U.S. dan Dharmala, R. (2016). Pengaruh Investasi Swasta, Upah Minimum Regional dan Pertumbuhan Industri Besar dan Sedang terhadap Penyerapan Tenaga Kerja di Provinsi Banten. *Jurnal Ekonomi-Qu (Jurnal Ilmu Ekonomi)* Vol. 6, No. 1, April 2016, Hal. 81-99.
- Sukirno, Sadono. (2008). *Ekonomi Pembangunan Proses, Masalah dan Dasar Kebijakan Pembangunan*. Cetaka Kedua. Jakarta: Kencana Prenada Media Group.
- Sumarsono, S. (2003). *Ekonomi Manajemen Sumber Daya Manusia*. Yogyakarta: Graha Ilmu.
- Todaro, M. P. (2003). *Pembangunan Ekonomi di Dunia Ketiga*. Haris Munandar [penerjemah]. Edisi Kesembilan. Jakarta: Erlangga.

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