*Article*

# The Effect of Investment, District Minimum Wages, and Number of Small Medium Industry Units on Labor Employment: Empirical Study on The District/City Small Medium Industry Sector 2013-2019

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**Abstract:** This study aims to analyze the effect of Investment, Regional

Minimum Wages, Numbers of medium and small industry on Employment of small and medium Industry, in the city/district of the Special Region of Yogyakarta in 2013-2019. This research is based on secondary data, namely data sourced from the book of small and medium industry potential and publication of the Central Bureau of Statistics. The analysis tool used is panel data regression with the fixed effect model method. Based on the results of the study, the Investment has a positive and significant effect on the Employment of Small and Medium Industry, the Regional Minimum Wages has a negative and significant effect on the Employment of Small and Medium Industry, and the number of Small and Medium industry has a positive and significant effect on the Employment of Small and Medium Industry.

***Keywords****: Employment of Small and Medium Industry, Investment, Regional Minimum Wages, Numbers of Small and Medium Industry*

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## 1. Introduction

The population growth in Indonesia is increasing from time to time, in September 2020 the population in Indonesia has reached 270.2 million people and is expected to continue growing, with an average increase rate of 1.25 percent out of 3.26 million people annually from 2010 - 2020 [1]. For developing countries, the problem of high population growth will certainly cause various problems in developing infrastructure, as high population growth will cause a rapid rate of increase in the number of workers.

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Meanwhile, new job opportunities available are very limited. [2]. The supply of labor that is higher than the demand will certainly create unemployment. One of economic indicators in a region/country good if the labor employment is high.

According to Law No. 13 of 2003 concerning Manpower, employment activities are related to labor activities before, during and after the work period. Meanwhile, the manpower is those who are able to do the work in producing goods and/or providing service services both to fulfill their own needs or to serve the community.

The manufacturing industry sector is one of the sectors that supports the economy in the Special Region of Yogyakarta with stable employment. Value of the industrial since 2019 with an average of three hundred thousand people annually. Employment in the Industrial sector is part of the production aspect which has become an important and influential element in the management and control of the production process and services.

**Table 1**. Comparison of Labor Employment in DIY between 2017 – 2019 (Population)

| **Year** | **BI** | **SMEs** |
|---|---|---|
| 2017 | 79.112 | 330.508 |
| 2018 | 83.427 | 351.425 |
| 2019 | 63.000 | 360.242 |
| **Average** | **75,179** | **354,058** |

Source: Industry and Trade Agency of DIY [3]

The manufacturing sector is divided into two parts, namely large industries and small and medium industries. Table 1.1 above shows a comparison between the employment of BI and SMEs workers in DIY. Evidence shows that there is an imbalance in the manpower employment between BI and SMEs. The number of employments in the SMEs sector is skyrocketing compared to BI, this is in line with the typical industry of each. Notably, in BI, industrial activities are emphasized on capital-intensive structures, whereas in IKM, production activities are focused on labor-intensive structures. In large capital-intensive industries, the focus will be on the use of technology sourced from capital inputs to support production process, while labor-intensive employment industries more on productivity of the labor it is obvious, that intensive capital-intensive is less in labor employment. In contrast intensive labor program requires and employ more labor.

The SMEs sector is basically an important sector for labor employment because of its labor-intensive nature, and it also brings more advantages as it can absorb more labor than other employment sectors. The simple setting of the unit, good resilience from economic shocks, and being able to be accessed by workers with lower secondary formal education are good advantages for the SMEs sector when compared to other economic sectors. The SMEs sector in DIY has enormous potential and will be able to continue growing if it is adhered with the local government monitoring policies that are beneficial to the SMEs sector. With the development and growth of the labor-intensive SMEs sector, the employment of labor is also increasing rapidly.

The Special Region of Yogyakarta itself is one of the areas with high SMEs potential. Furthermore, the culture and market availability due to tourism activities is also one of the factors that causes the SMEs sector in DIY to continue growing. The ease of the tremendous line of business operated unfolding in the SMEs sector is reflected in the large growing number of SMEs units. There were 84,234 SMEs units between 2010 –

2013 and surprisingly keep on mounting until 2019 with 97.013 SMEs units. It's undeniable that SMEs is one of the most profitable mounting sectors in DIY. Consequently, The SMEs sector operational line in DIY is becoming much wider. As a result of many SMEs in DIY, ranging from food processing such as gudeg cans, batik and wayang crafts, as well as metal processing such as silver processing, all of which can become economic commodities domestically and globally.

From the description above, it can be concluded that the capacity and need for workers in small and medium industries in the Special Region of Yogyakarta is very high. In addition, small and medium industries are one of the informal sectors which are resistant to crisis shocks, and they can employ workers with low skills or lower secondary educational background. This is owing to the fact that the small and medium industry sector does not require special educated skilful workers. The existence of small and medium industries is expected to have a good derivative impact such as increasing the capital value, being able to employ a large number of workforces, and having value added creation taken from each input or basic material that is processed.

Employment on the industrial sector is influenced by the various aspects below: Investment, number of business units, as well as regional minimum wages. The existence of investment is closely related to the capital that can be used by the companies to increase their productivity in both capital-intensive and labor-intensive industries. Needless to say, if the capital value in a production unit increases, it will also increase the need for other aspects of production, one of which is the need for labor employment in an industrial unit. In addition, investment also increases the potential for the emergence of new industries in the economy moreover, direct investment will certainly result in additional capital value and an advancement in production capacity.

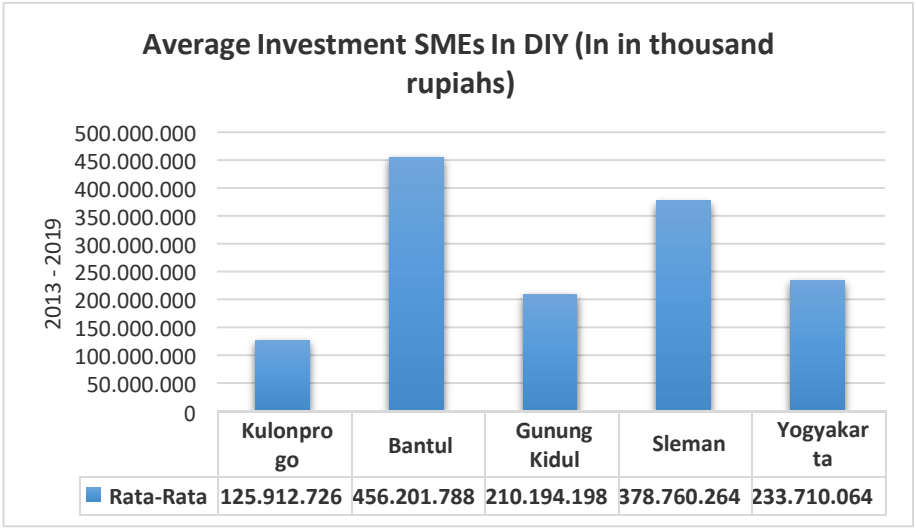


**Figure 1**. SMEs Investment in DIY in 2013 – 2019

Source: Central Bureau of Statistics DIY [3]

In Figure 1 we can see that Bantul is the area with the highest amount of investment in SMEs in DIY however the area with the lowest investment is Kulon Progo. This implies that SMEs in Bantul are well developed, followed by the Slemanbeing second in rank. From the picture above, it can also be concluded that there is an imbalance in the investment value in SMEs in Kulon Progo. The occurrence is due to various aspects such as the demographics location of the region and the main economic business supporting field in Kulon Progo community which is still dominated by the agricultural sector. It is clear that Bantul being the area with the highest SMEs investment value, indicates that Bantul has good SMEs potential and will continue to grow as it has many SMEs sectors including pottery-producing areas in Kasongan and leather crafts in the Manding are a notably investment in SMEs will certainly be very good for the production sector in small and medium industries. Furthermore, investment in SMEs will certainly increase productivity and finally it will also allow SMEs to employ more labor.

Several theoretical studies show that one way to expand job opportunities is through the development of the industrial sector, especially labor-intensive industries such as small and medium industries. Development in this industrial sector will certainly increase productivity and simultaneously create job opportunities. To develop the industrial sector, adequate investment required making it possible to the development in the industrial sector to be managed according to its objectives. Investment can enhance the economy through the mechanism of aggregated demand, which can then increase productivity and in the end will be able to increase the demand for labor employment. In addition, another factor that can become a problem in labor employment in relation to the investment aspect of SMEs sector is the amount of minimum wage/wage set in certain regions. The demand for labor employment certainly has related to the number of wages and the quantity of labor required by the business unit. Basically, the workforce and the employer will apply economic law principles in which workers will attempt to get the maximum possible wages to make ends meet for their daily needs. Nonetheless, employers will try to issue the lowest possible number of wages in terms of minimizing the labor employments costs [2].

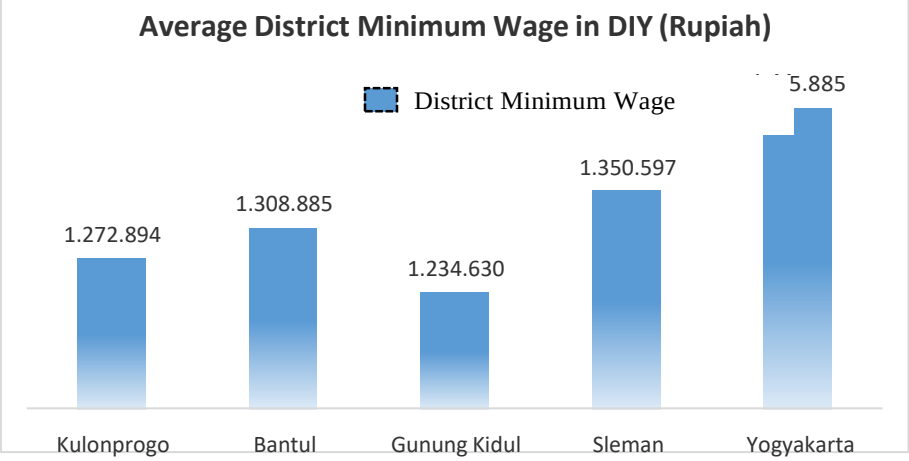


**Figure 2**. DIY District Average Minimum Wage in 2013 – 2019
Source: Bappeda DIY [5]

Next is the average district minimum wage in DIY in 2013-2019, in Figure 2 above it can be seen that there are differences in the minimum wages amount for each district and city in DIY. Yogyakarta, which is the city of the central government in DIY, has the highest UMK value compared to other regencies, meanwhile, Gunungkidul is the area with the lowest UMK amount. The high and low wages are influenced by various factors, including regional economic growth and inflation. The minimum wage can affect the number of labor employment in a certain area, evidently the amount of a minimum wage has an effect on labor financial. A low minimum wage will certainly ease the burden on industrial owners in financing the condition need for labor employment as wages are one of the basic elements in a production structure of an industry. Prior to giving a raise in wages, the company must analyze and calculate its production costs on a certain cost balance model.

Furthermore, a raise in the minimum wage will definitely affect the production costs that must be borne by the company in order to be balanced with production costs, the company should come with various options. One of them is by reducing the number of workers. By doing so, the company can reduce the costs spent to cover the rise of the minimum wage.

What is more there are other factors theoretically considered that affect the labor employment in the SMEs sector. Looking closely, it is the existence of labor-intensive small and medium industries can certainly employ a high number of workers. The reason behind it is the demand for a large number of workers is one of the elements contributing to the above-mentioned reason. More than that, the government's policy to encourage the investment in the augmentation small and medium industries that are resistant to crises and shocks will automatically boost the rate of industrial growth. long with that, business units in the small and medium industry sector are expected to be unfolded.

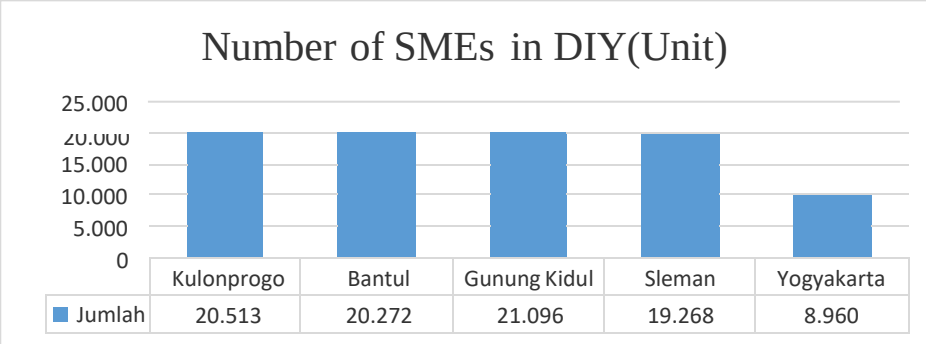


**Figure 3**. Total Number of SMEs in DIY in 2013 – 2019 [6]

The Small and medium growing industries. engaged in various business fields, have good potential and prospects to be expanded. In fact, SMEs as a business organization is expected to be in charge of opening more job opportunities as the number of business units continues to grow making it certain that the workforce continues to grow every year.

In Figure 3, small and medium industrial sectors in each district in the Special Region of Yogyakarta is also shown. It can be seen that Yogyakarta has the lowest number of SMEs units compared to the other four regions. In fact, Yogyakarta is the region with the highest inequality in the number of SMEs units compared to the other four regions. He fact that its geographic location does not cope a broad cope, the minimum wage standard is high and the community who earns a living working in Yogyakarta. Furthermore, The SMEs sector in DIY is definitely one of the economic sectors that has good prospects and potential for labor employment. With all the potential elements attached, the development and growth of this sector will certainly bring a huge impact on the economic progress in DIY it will become the pillar of the regional GRD. The awareness of factors that can affect the SMEs sector in the labor employment in DIY. To conclude, the awareness of the elements affected the SMEs labor employment is useful in determining the right policy applied in SMEs.

Based on the description above, to find out the correlation between the industrial sector, the minimum wage and the growth of the industrial sector on employment in the Special Region of Yogyakarta, the authors are interested in conducting research with the title "Analysis on the Effect of Investment, District Minimum Wage, and Number of Small and Medium Industrial Units on labor Employment (Empirical Study on Small and Medium Industry Sector in DIY Regency/City 2013-2019)"

## 2. Literature

### 2.1. Small and Medium Industry Manpower

According to Law No. 13 of 2003 concerning Manpower, a workforce is anyone who is able to do work to produce goods and services both to fulfill both their own necessity and the community necessity. Hence, workers are residents who are working, looking for work. In contrast, there are also activities performed, such as attending school or doing house core. Each country in the world has their own regulation and policy in determining the standard of labor employment recruitment. This is owing to the fact that each country has different elements to be considered upon labor employment. Some countries focus more on the minimum and maximum working age standard and simultaneously decide the proper minimum wages applied according to the task assigned. In detail, the term human labor in economics perspective is not merely about human power for hoeing, sawing, doing carpentry, and other physical activities. What is more, they are an asset and will be further referred as human resources (human resources).

Human resources are clearly broader in meaning than just labor. The term human resources include not only physical energy or human physical energy but also mental abilities or non-physical abilities, both educated and uneducated personnel. It involves not only skilled workers but also unskilled workers. In a deeper meaning, it is a collection of all human attributes or abilities contributed to the production process of goods and services conducted. Therefore, it is evidence that the good characteristics level of the human resources of a nation depend on the obedience, physical strength, education, and the skills of its population [7].

The company's demand for production inputs is a derived demand, with the implications company's demand for labor and capital is determined by consumer demand for the company's products. If the demand for the company's output is large, then the possibility of for labor demand and capital is also large. It's likely happens

because entrepreneurs or industrial units produce more goods than they did previously to meet the quantity of consumer demand [8].

### 2.2. The Role of Investment

Investment expenditure in terms of buying capital goods and production equipment aiming at replacing and adding to capital goods in the economy, will be useful to produce goods and provide good services in the future. The goal of Investment is to increase higher productivity which will result in a larger surplus, thus affecting the investment process in one sector or another. In this way, job opportunities will be increased and lead to more labor employment. Investment is considered to have an influence on the development of the industrial sector which leads to the opening of job opportunities so as to reduce the unemployment rate. Investment is one of the factors that can affect the demand for labor. Mathematically the similarities are visible [9].

Harrod-Domar views that capital formation is considered as an expenditure that will increase the ability of an economy to produce goods and or services, as well as an expenditure that will increase the effective demand of the whole society. Upon planning, the amount of the capital should cover the length or period of time required so that the goal of producing a plethora of better goods and providing better services can be achieved. In this case, investment is considered to have two roles in the economy. Those two roles contrive a rise in income taken from investment which will affect the consumer demand, and conversely mount up production capacity in performing economic activity designed from using investments to increase capital stock. As a result, production capacity is enhanced. Needless to say, investment is very influential in the formation of shaping a production output, to summarize, capital has a positive effect on productivity [10].

### 2.3. District Minimum Wage

Wage is the right of the worker/labourer, received and expressed in the form of money as a reward from the entrepreneur or employer to the worker/labourer which is determined and paid according to a work agreement, agreement, or statutory regulations, including allowances for workers/laborers and their families for a job and/or service that has been or will be performed according to Law No. 13 of 2003 concerning Manpower. Minimum wages are wages set at a regional minimum, regional sectoral and subsector served as the basic wage and allowances. Based on the regulation of the minister of manpower and transmigration No.07 of 2013 concerning the minimum wage, article 1 paragraph 1 which explains that the minimum wage is the lowest monthly wage consisting of basic wages including fixed allowances set by the governor as a safety instrument.

### 2.4. Small Medium Industry

Law No. 3 of 2014 stated that the order of all activities related to industrial activities. Industry is all forms of economic activity that processes raw materials and/or utilizes industrial resources and produces goods that have added value or higher benefits, including industrial services. Meanwhile, according to BPS, the processing industry is an economic activity that carries out the activity of changing a basic good mechanically, chemically, or manually to become a finished/semi-finished product, and/or goods of

less value into goods of higher value and are closer to the nature of the goods end user. Examples of this activity are industrial services and assembling.

## 3. Methods

This research is descriptive research with a quantitative approach. The analytical tool used in this study is panel data, which is a combination of time series data taken from the period 2013-2019, and cross section data from four districts and one city in the Special Region of Yogyakarta with a total of 35 observations. The data source in this study was obtained from the Central Bureau of Statistics of DIY which was collected from several publications of the Special Region of Yogyakarta in figures for the period 2005-2019. Sources of data in this study were obtained from various sources such as the Central Statistics Agency at the Regency / City level in DIY and the Department of Industry and Trade of DIY in the period 2013-2019.

The panel data regression model in this study is as follows:

$$\text{Ln}\,(TK_{it}) = \beta_0 + \beta_1\,\text{Ln}\,(INV_{it}) + \beta_2\,\text{Ln}\,(UMK_{it}) + \beta_3\,\text{Ln}\,(SMEs_{it}) + e_{it} \quad (1)$$

Ln (TK) = SMEs labor Employment (Population)

Ln (INV) = Investment (Thousand Rupiah)

Ln (UMK) = Regency / City Minimum Wage (Rupiah)

Ln (IKM) = Number of IKM Unit (Unit)

β = Parameter

i = Number of observation areas (5 Districts / cities)

t = Time period (2013-2019)

e = Residual

According to [11], to estimate with panel data, there are three models that are often used, namely:

a. Common Effect Model (CEM) or Pooled Least Square (PLS)

The common effect model is the simplest model used in estimating the panel data model, by combining cross section and time series data as a single unit without looking at the difference between time and individuals which will result in a large number of observations. The Common Effect model ignores the difference in dimensions between individuals and time or in other words the behavior of the data between individuals is the same in various time periods. The basic assumption in this PLS approach is that the intercept value and the slope value between the cross-section unit and the time series unit are the same.

b. Fixed Effect Model (FEM)

Fixed Effect Model is a model used to determine the difference between objects and constants between objects. It is assumed that the intercept of each individual is different, while the slope between individuals is the same. The estimation of the Fixed Effect model can be done by using a dummy variable to explain the difference in the intercept. This estimation model is often called the Least Square Dummy Variables (LSDV) technique.

c. Random Effect Model (REM)

The dummy variable previously used in the Fixed Effect model which represents the model's ignorance has the consequence of reducing the Degree of Freedom which will reduce the efficiency of the parameter. So, this problem must be overcome by using a disturbance variable (Error Terms) which has another name: Random Effect Model. The approach used in Random Effect assumes that each individual has a different intercept, where the intercept is a random or stochastic variable. This model is very useful if the individual used as a sample is a random choice and is the representative of the population. This model also takes into account errors which may be correlated across cross sections and time series.

Out of the three models, only one of the best models will be selected to be used in the study. Therefore, it is necessary to have Chow test, Hausman test and Lagrange multiplier test to choose which model is the best for this research. The description of the three tests is as follows:

1. Chow test

The Chow test is referred to as the F-count test which is a test to select the best model by comparing the common effect model with the fixed effect model.

2. Hausman Test

Hausman test is used to select the most appropriate model whether the most appropriate model uses Fixed Effect or Random Effect. The results of determining the value of the Hausman test are obtained by comparing the chi-square statistical value with the critical value of the chi-square, the degrees of freedom (df) used are k (number of independent variables).

3. Lagrange Multiplier (LM) Test

The Lagrange Multiplier (LM) test is a test to determine whether the Random Effect model is more appropriate to use than the Common Effect method.

## 4. Results

### 4.1. Chow Test

The proposed hypothesis is:
Ho: The correct model is the Common Effect Model
Ha: The correct model is the Fixed Effect Model

From the results of the Chow test (Table 2) using the e-views application, the F-count result is (9.423303), while the predetermined F-table value is (2.91). Then it can be seen that the F-count value is (9.423303) > F-table is (2.91). Thus, Ho is rejected, and Ha is accepted, which means that the most appropriate model based on the Chow test for panel data regression in this study is using the Fixed Effect Model. In addition, it can also be seen from the probability value, where the probability is 0.0000 < (5% or 0.05).

**Table 2.** The Chow Test Result

Redundant Fixed Effects Tests
Pool: DATAPANEL
Test cross-section fixed effects

| Effects Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-section F | 9.423303 | (4,27) | 0.0001 |
| Cross-section Chi-square | 30.583679 | 4 | 0.0000 |

Cross-section fixed effects test equation:
Dependent Variable: TK?
Method: Panel Least Squares
Date: 06/08/21 Time: 22:06
Sample: 2013 2019
Included observations: 7
Cross-sections included: 5
Total pool (balanced) observations: 35

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 4.195125 | 1.292477 | 3.245803 | 0.0028 |
| Ln_INV? | 0.266188 | 0.028972 | 9.187924 | 0.0000 |
| Ln_UMP? | -0.277096 | 0.095705 | -2.895324 | 0.0069 |
| Ln_IKM? | 0.577809 | 0.039773 | 14.52776 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.937140 | Mean dependent var | 11.04144 |
| Adjusted R-squared | 0.931057 | S.D. dependent var | 0.357833 |
| S.E. of regression | 0.093956 | Akaike info criterion | -1.784763 |
| Sum squared resid | 0.273662 | Schwarz criterion | -1.607009 |
| Log likelihood | 35.23335 | Hannan-Quinn criter. | -1.723402 |
| F-statistic | 154.0534 | Durbin-Watson stat | 0.289308 |
| Prob(F-statistic) | 0.000000 | | |

### 4.2. Hausman Test

The proposed hypothesis is:

Ho: The right model is the Random Effect Model
Ha: The correct model is the Fixed Effect Model

Finding Chi – square table:
Chi-square table = α df (k-1)
Chi-square table = 5% df (4-1)
Chi-square table = 5% df (3)
Chi-square table = 7,815

**Table 3.** Hausman Test Result

Correlated Random Effects - Hausman Test
Pool: DATAPANEL
Test cross-section random effects

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|---|---|---|---|
| Cross-section random | 8.504488 | 3 | 0.0367 |

Cross-section random effects test comparisons:

| Variable | Fixed | Random | Var(Diff.) | Prob. |
|---|---|---|---|---|
| Ln_INV? | 0.210265 | 0.238749 | 0.000303 | 0.1015 |
| Ln_UMP? | -0.401090 | -0.365755 | 0.000342 | 0.0561 |
| Ln_IKM? | 0.841268 | 0.736218 | 0.001465 | 0.0061 |

Cross-section random effects test equation:
Dependent Variable: TK?
Method: Panel Least Squares
Date: 06/08/21 Time: 22:07
Sample: 2013 2019
Included observations: 7
Cross-sections included: 5
Total pool (balanced) observations: 35

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 4.454479 | 0.900690 | 4.945628 | 0.0000 |
| Ln_INV? | 0.210265 | 0.037480 | 5.610052 | 0.0000 |
| Ln_UMP? | -0.401090 | 0.076219 | -5.262371 | 0.0000 |
| Ln_IKM? | 0.841268 | 0.066583 | 12.63490 | 0.0000 |

Effects Specification

Cross-section fixed (dummy variables)

| | | | |
|---|---|---|---|
| R-squared | 0.973765 | Mean dependent var | 11.04144 |
| Adjusted R-squared | 0.966964 | S.D. dependent var | 0.357833 |
| S.E. of regression | 0.065040 | Akaike info criterion | -2.430011 |
| Sum squared resid | 0.114214 | Schwarz criterion | -2.074503 |
| Log likelihood | 50.52519 | Hannan-Quinn criter. | -2.307289 |
| F-statistic | 143.1665 | Durbin-Watson stat | 0.536428 |
| Prob(F-statistic) | 0.000000 | | |

Based on the results of the Hausman test, the calculated Chi-square value is (8.504488), while the Chi-square table is (7.815) which means that the Chi-square count is (8.504488) > Chi-square table (7.815). Then it can be seen that Ho is rejected, and Ha is accepted, which means that the most appropriate model of the Hausman test is the Fixed Effect Model. In addition, it can also be seen from the probability value, where the probability is 0.0367 < (5% or 0.05).

Based on the Chow test and Hausman test, it is known that the best model used in this study is the Fixed Effect Model. Fixed Effect Model Estimation is an estimation method to find out the difference between the intercepts of variables, but with the intercept at the same time. The Fixed Effect model assumes that the regression coefficient remains constant over time and between variables.

**Table 4**. Estimated Outcome of Fixed Effect Model

Dependent Variable: TK?
Method: Pooled Least Squares
Date: 06/08/21 Time: 22:00
Sample: 2013 2019
Included observations: 7
Cross-sections included: 5
Total pool (balanced) observations: 35

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 4.454479 | 0.900690 | 4.945628 | 0.0000 |
| Ln_INV? | 0.210265 | 0.037480 | 5.610052 | 0.0000 |
| Ln_UMP? | -0.401090 | 0.076219 | -5.262371 | 0.0000 |
| Ln_IKM? | 0.841268 | 0.066583 | 12.63490 | 0.0000 |
| Fixed Effects (Cross) | | | | |
| _KULONPROGO--C | -0.059620 | | | |
| _BANTUL--C | 0.019208 | | | |
| _GUNUNGKIDUL--C | -0.167205 | | | |
| _SLEMAN--C | -0.022434 | | | |
| _KOTAYOGYAKARTA--C | 0.230051 | | | |

Effects Specification

Cross-section fixed (dummy variables)

| | | | |
|---|---|---|---|
| R-squared | 0.973765 | Mean dependent var | 11.04144 |
| Adjusted R-squared | 0.966964 | S.D. dependent var | 0.357833 |
| S.E. of regression | 0.065040 | Akaike info criterion | -2.430011 |
| Sum squared resid | 0.114214 | Schwarz criterion | -2.074503 |
| Log likelihood | 50.52519 | Hannan-Quinn criter. | -2.307289 |
| F-statistic | 143.1665 | Durbin-Watson stat | 0.536428 |
| Prob(F-statistic) | 0.000000 | | |

Based on the results of the panel data regression estimation with e-views 10, the panel data regression equation obtained is as follows:

$$Ln(TKit) = \beta 0 + \beta 1\ Ln(INVit) + \beta 2\ Ln(UMKit) + \beta 3\ Ln(IKMit) + eit$$

$$Ln(TKit) = 4.454479 + 0.210265\ Ln(INVit) - 0.401090\ Ln(UMKit) + 0.841268$$

### 4.3. Partial Test (t Test)

The t test is a partial data analysis process. The t-test will show how much influence the independent variable has partially on the dependent variable. The t-test aims to see the extent of the partial effect of the independent variable on the dependent variable. From the results of the data above the influence between variables are including:

a. The Effect of Investment on the Employment of Small and Medium Enterprises
From the results of the data above, it can be seen that the coefficient of the investment variable is (0.210265) with a t-count value (4.945628) > t-table (-2.039) which in this case has a significant positive effect on investment. In addition, it can also be seen that the probability value of the Investment variable is (0.0000), whereas the probability value is (0.000) < (5% = 0.05). So, the hypothesis Ho is accepted, and Ha is rejected, Furthermore, the Investment variable has a Significantly Positive effect on the Labor employment of Regency/City IKM Workers in DIY in 2013-2019.

b. The Effect of the District Minimum Wage on the Labor Employment of SMEs
From the results of the data above, shows that the coefficient of the Regency minimum wage is (-0.401900) with a t-count value (-5.262371) < t-table (-2.039) which in this case means that the Regency minimum wage has a significant negative effect. In addition, it can also be seen that the probability value of the district minimum wage variable is (0.0000), whereas the probability value is (0.0000) < (5% = 0.05). As a result, the hypothesis Ho is rejected and Ha is accepted, as the district minimum wage variable has a significant negative effect on the employment of district/city IKM workers in DIY in 2013-2019.

c. The Influence of Small and Medium Industries on the labor employment of SMEs
From the results of the data above, it can be seen that the coefficient of the Number of Small and Medium Industries (0.841268) with a t-count value (12.63490) > t-table (2.039) which in this case means that Small and Medium Industries have a significant positive effect. In addition, it can also be seen that the probability value for the Small and Medium Industry variable is (0.0000), whereas the probability value is (0.0000) < (5% = 0.05). Thus, the hypothesis Ho is rejected, and Ha is accepted, so that the Small and Medium Industry variable has a Significantly Positive effect on the Labor Employment of IKM Regency/City in DIY in 2013-2019.

### 4.4. Simultaneous Test (F Test)

The F test is used to determine whether the independent variables used together affect the dependent variable or have no effect at all. Based on table 4, it is obtained that the calculated F test is 143.1665 with the F-count probability of 0.000000 < (5% = 0.05), and the F-table calculation is (2.91), where F-count (143.1665) > F-table (2,91) which means Ho is rejected, and Ha is accepted. So that it can be seen that the variables of Investment, Regency Minimum Wage and Number of Small and Medium Industries simultaneously have a significant effect on the variable of Regency/City SMEs Labor Employment in DIY in 2013-2019

### 4.5. Uji Goodness of Fit (R2)

The Goodness of Fit (R2) test or the value of the coefficient of determination is used to see Investment, Regency Minimum Wage and Number of Small and Medium Industries affect the SMEs Labor Employment variable. Based on the table 4, goodness of fit is known that the Adjusted R-squared ($R^2$) coefficient is (0.966964) or 96.69%, which means that the variations in the increasing and decreasing of the independent variables, Investment, Regency Minimum Wage and Number of Small and Medium Industries are able to be described using the variations in the increasing and decreasing of the

dependent variable Labor Employment in SMEs is 96.69% and the remaining 3.31% is explained by other variables outside the model, such as the production value of SMEs, Economic Growth, Inflation and so on.

## 5. Discussion

### 5.1. The Effect of Investment on the Labor Employment of SMEs

Based on the results of panel data regression that had previously been carried out. A conclusion can be drawn that the Fixed Effect Model (FEM) is the best estimation model that can be used. From the results of the Fixed Effect Model (FEM) estimation that has been carried out, it can be obtained that investment has a positive and significant effect on the absorption of SMEs Regency/City Workforce in DIY in 2013-2019. The results of the Fixed Effect regression, the INV (Investment) variable shows a probability level of (0.0000) at a significant level of 5% or (0.05) with a variable coefficient value of 0.210265, meaning that if the investment value increases by 1%, the SMEs Labor employment will increase by 0.21% assuming ceteris paribus or other variables are considered constant.

### 5.2. The Influence of UMK to labor Employment of SMEs

Based on the results of research conducted using the Fixed Effect model, it is known that the Regency Minimum Wage variable has a negative and significant effect on the absorption of SMEs Regency/City Workforce in the Special Region of Yogyakarta in 2013-2019. The coefficient value of the Regency Minimum Wage variable is (-0.401900) with probability (0.0000) < 5% significance level or (0.05). This shows that every 1% increase in the Regency Minimum Wage will reduce the SMEs Labor employment by 0.4%, assuming ceteris paribus or other variables are considered constant.

### 5.3. The Influence of IKM on the Labor Employment of SMEs

Based on the results of the research using the Fixed Effect model panel data analysis, it is known that the variable Number of SMEs has a significant positive effect on the Labor Employment of SMEs Regency/City in the Special Region of Yogyakarta in 2013-2019. The value of the variable coefficient of the number of SMEs is (0.841268) with a probability of (0.000) < 5% significant level or (0.05) meaning that if the number of SMEs increases by 1%, the Labor Employment in SMEs will increase by 0.84% with the assumption of ceteris paribus or other variables are held constant.

## 6. Conclusion and Recommendations

Based on the results of the analysis of data processing and discussion of the influence between the independent variables consisting of Investment, District Minimum Wage and Number of SMEs with the dependent variable the Labor employment of Regency/City SMEs in the Special Region of Yogyakarta in 2013-2019, it can be concluded as follows:

a. Investment has a Significantly Positive Effect on the labor Employment of Regency/City SMEs in the Special Region of Yogyakarta in 2013-2019

b. The Regency/City Minimum Wage has a significant negative effect on the Labor Employment of Regency/City SMEs in the Special Region of Yogyakarta in 2013-2019
c. The number of SMEs has a significant positive effect on the Labor Employment of Regency/City SMEs Workers in the Special Region of Yogyakarta in 2013-2019

Based on the conclusions stated above, the suggestions given in this study research are as follows:

a. The accessibility to get investment and low interest rates applied on loans in the SMEs loans for capital in developing businesses, entrepreneurs often encounter bureaucratic problems in the financial institutions concerned, more than that loan interest rates applied are too high, as a result entrepreneur are reluctant to apply for capital loans. In that case, the government needs to determine a policy of providing capital that is simple or easy and at low interest rates to the SMEs sector. This loan will be very useful not only to increase the production of business products, but also to increase the number of employments in the small and medium industry sector due to the business development carried out by the SMEs owner
b. Maintaining the balance of the minimum wage value, with the minimum wage set by the government while still paying attention to the two interests which are the interests of small and medium industries and the interests of the workforce. They should be provided with sufficient wages for the life of the workforce and the number of wages that do not burden the owners of SMEs termination of employment will not occur, and labor employment will continue to increase. We are aware that cannot be a decline in SMEs when the Decent Living Needs continues to increase from year to year. In addition, by maintaining the price stability of the main necessities which are included in the decent living needs, there will be no demand to increase the minimum wage which will burden the production costs of entrepreneurs and will have an impact on reducing labor or employment of labor in the SMEs sector.
c. To increase the number of SMEs, it is necessary to facilitate permits in the establishment of SMEs, because often bureaucratic problems prevent the establishment of a business unit or small and medium industry itself, while each business requires various permits for many things, such as issues of legitimacy or legislation in the establishment of a business unit or for the long term in the future in an effort to develop its industrial unit. The more difficult it is to obtain a permit for the establishment of a business or industrial unit, the development and addition of units in the sector will not occur. With the simple procedure of getting permits issued by the government, the establishment of these small and medium business units or industries will be easy and increase the willingness of entrepreneurs to establish them. So that the establishment and increase in the number of small and medium industrial business units will increase the number of employments in the SMEs sector, because the IKM sector is a labor-intensive sector that requires a lot of manpower.

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