Distribution and Factors Affecting Investment in Yogyakarta Special Region

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Abstract

This study aims to determine the distribution of investment for each PMA and PMDN in DIY in 2019, classify regions based on investment for PMA and PMDN, and determine the factors that affect investment PMA and PMDN in DIY. This study uses secondary data. The variables used in this research are PMA and PMDN investment, labor force, Human Development Index (IPM), Regional Minimum Wages (UMR), and Local Taxes. This study's population and sample were 5 districts/cities for the PMA and PMDN investment models. Descriptive analysis is using to determine the distribution of investment, Klassen typology to classify areas based on investment, and choose the factors that affect investment using the panel data method. The results showed that: (1) The distribution of PMA and PMDN investment in DIY was still not evenly distributed. (2) The regional classification based on investment shows that Kulonprogo, Bantul, and Gunungkidul districts lack foreign investment. Meanwhile, the districts of Sleman, Bantul, and Gunungkidul lack domestic investment. (3) Factors that influence PMA are UMR and IPM, and factor that influence PMDN are labor force.

Keywords: *Distribution, Investment, PMA , PMDN, Labor Force, UMR, IPM, Local Taxes*

Abstrak

Tujuan dari penelitian ini adalah untuk mengetahui sebaran investasi untuk masing-masing investasi PMA dan PMDN di DIY tahun 2019, mengklasifikasikan daerah berdasarkan investasi untuk masing-masing investasi PMA dan PMDN, dan mengetahui faktor-faktor yang mempengaruhi investasi untuk masing-masing investasi PMA dan PMDN di DIY. Penelitian ini menggunakan data sekunder. Variabel yang digunakan dalam penelitian ini adalah Investasi PMA dan investasi PMDN, Angkatan kerja, Indeks Pembangunan Manusia (IPM), Upah Minimum Regional (UMR), dan Pajak Daerah. Populasi dan sampel dalam penelitian ini adalah 5 kabupaten/kota untuk model investasi PMA dan PMDN. Hasil penelitian menunjukkan bahwa: (1) Sebaran investasi PMA dan PMDN di DIY masih belum merata. (2) Klasifikasi daerah berdasarkan investasi menunjukkan Kabupaten Kulonprogo, Bantul, dan Gunungkidul kekurangan investasi PMA. Sedangkan Kabupaten Sleman, Bantul, dan Gunungkidul kekurangan investasi PMDN. (3) Faktor yang mempengaruhi investasi PMA yaitu UMR (Upah Minimum Regional) dan IPM (Indeks Pembangunan Manusia) dan faktor yang mempengaruhi investasi PMDN yaitu Angkatan kerja.

Kata Kunci: Sebaran, Investasi, PMA, PMDN, Angkatan kerja, UMR, IPM, Pajak daerah

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INTRODUCTION

Indonesia is a unitary state that holds fast to the state ideology, Pancasila. Pancasila is a guideline for all Indonesian people. One of the precepts contained in Pancasila is the fifth principle, which reads "Social justice for all Indonesian people". Under this article's provisions, all society levels must participate in creating justice for all Indonesian people. The ideal of the Indonesian nation is the creation of just and prosperous community life. However, since Indonesia's independence, these ideals have existed until now.

After 74 years of independence, the reality in this country is still not what was expected. One of the indicators that shows the lack of a just and prosperous society is the imbalance in Indonesia's several regions. Indonesia's economic growth in 2019 reached 5.02% (BPS 2019), but an increase in economic growth did not accompany this income distribution. According to the 2015 World Bank, economic growth that occurs can only be enjoyed by the richest 20 percent of the population of the general population. This means that in Indonesia economic growth can only be felt by some people.

In 2019, the level of expenditure inequality of Indonesians was 0.382. This figure has decreased by 0.002 when compared to the previous year which was 0.384. This figure is obtained from the calculation of the Gini ratio. Gini ratio or Gini index is an indicator used to determine the overall level of income. The Gini index scale ranges from 0 - 1, the Gini index number closer to 1 indicates that inequality is getting bigger. The impact of income inequality is to hinder efforts to reduce poverty.

Currently, inequality is still spreading in several provinces in Indonesia. Some of them have higher levels of inequality when compared to other provinces. The following picture 1 is a list of provinces with the highest rates of inequality in Indonesia.

The ten provinces above have very high rates of inequality. Of the ten provinces, the highest income inequality is in Daerah Istimewa Yogyakarta (DIY). The Gini ratio in DIY Province reaches 0.423. The magnitude of this inequality rate is also accompanied by a reasonably high poverty rate in DIY, reaching 11.70 (BPS DIY, 2019). Until now, inequality is still one of the main problems in this province.
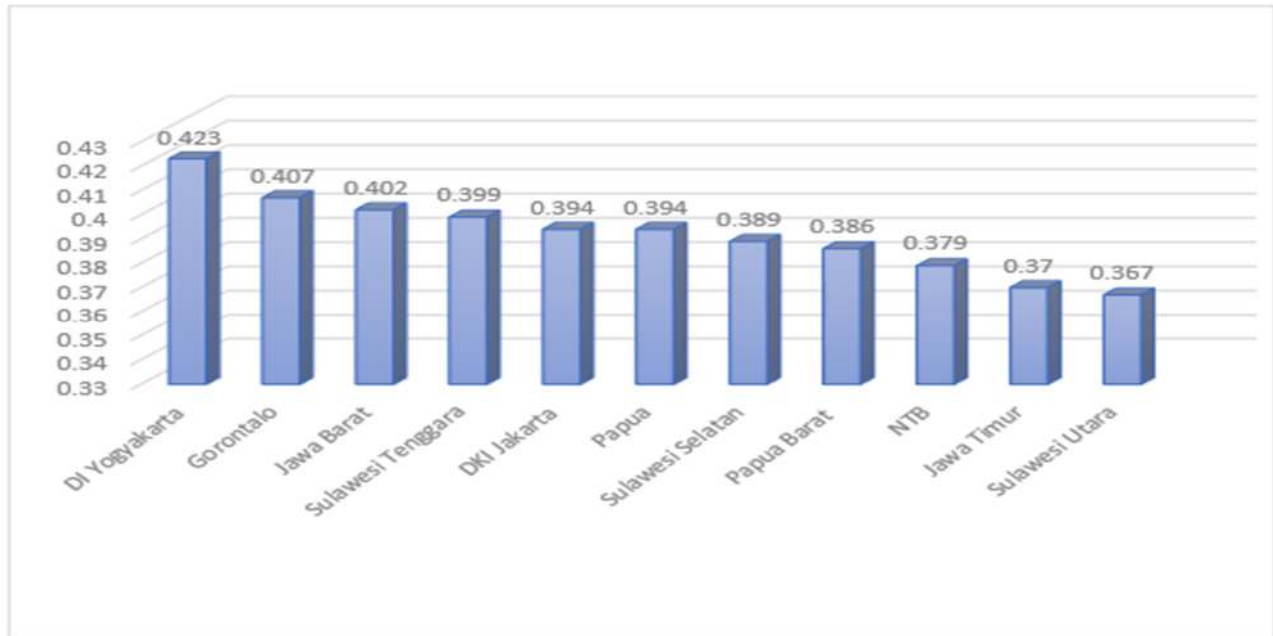
Various efforts have been made to reduce the high level of inequality in DIY, but the fact is that this province is still the region with the highest level of inequality in Indonesia for the last 5 years. Since 2015, DIY has become the province with the highest inequality in Indonesia and has a Gini ratio of 0.433 (BPS 2015).

Income inequality is a condition where there is an unequal distribution of income received by the community. Inequality is determined by the level of development in an area. The local government's success also influences this in managing its territory, which impacts the welfare of its population. The value of GDRP per capita is used to measure the population's welfare level in an area.

GDRP is the sum of all business units in the form of value-added goods and services produced by all economic activities of a region in a certain period of time. To determine the level of community welfare in an area, the calculation of real income or GDRP per capita in that area is used. GDRP per capita is the result of the total output produced divided by the total

population. Economic growth is a condition in which there is an increase in output per capita in the long run (Boediono, 1981). It means that when the per capita GDRP of a region is high, the economic growth in that area will increase and impact the people's welfare in that area.

Picture 1 Indonesia's 2019 Gini Ratio
Source: databoks.katadata.co.id 2019

An area with a high amount of GDRP per capita can be said to be an area with a running economy, and the population in it can be said to be prosperous. However, areas with low per capita GDRP can mean that their population cannot be said to be prosperous. The difference in the value of GDRP per capita is due to the ability of local governments to manage their regions differently.

In addition, the condition of natural and human resources and the availability of infrastructure in the regions can also be factors that determine the level of GDRP per capita value. Efforts should be made to encourage economic growth in the regions, especially in areas with low per capita GDRP.

Several studies prove that investment in an area can increase economic growth and reduce the inequality that occurs. In a study by Wahyuni et al. (2014) regarding the effect of investment on economic growth and income disparities in Bali regencies/cities, it is found that investment returns have a significant effect on income inequality through economic growth in districts or cities in Bali Province.

In a study by Nangarumba (2015) regarding the effect of investment on income inequality in all provinces in Indonesia resulted in the conclusion that increased investment has a negative relationship with income inequality. This means that increased investment will reduce income inequality and create income

distribution. Anggina and Astaningtyas (2017) state that investment has a negative and significant effect on inequality in income distribution in districts/cities in DIY. The capital owned by the government is not sufficient to finance all regional needs, so that the incoming investment will be beneficial for the economic growth of a region.

Investment will lead to the formation of regional capital formation. This is a logical consequence of the limited resources, technology and capital owned by the regions (Pangestuti, 2018). If local governments are unable to attract investors to their regions, then the economic growth in that area will be far behind other regions that are able to attract investors. The amount of investment received in the form of foreign investment, and domestic investment in each region varies. Each region has its attractiveness for investors. This is also related to local governments' success in managing their territories so that investment can increase every year.

However, most investors are more interested in investing in more prosperous areas because the benefits are greater than the other. This makes it difficult for poor regions to get investment and challenging to develop so that the inequality gap is widening. The distribution of investment and the factors that influence it is a problem that needs to be studied because it can be used as a guide for local governments to encourage investment in their regions.

Based on the background described above, the purpose of this study is to determine the distribution of investment for each PMA and PMDN investment in DIY, classify regions based on investment for each PMA and PMDN investment, and determine the factors that affect investment for respectively PMA and PMDN investments in DIY.

RESEARCH METHODS

This research is quantitative research. This study uses secondary data sourced from DPPM DIY, District/City BPS in DIY, Bappeda DIY, and the Ministry of Finance's DJPK. The data used are time series data namely data from 2015-2019 and cross-section of 25 districts/cities in the Province of DIY. The variables used in this research are PMA and PMDN investmen, labor force, Human Development Index (HDI), Regional Minimum Wages (UMR), and Regional Taxes.

Descriptive analysis is used to determine the distribution of investment. Descriptive statistics are statistics used in describing data into clearer and easier to understand information that provides an overview of the research (Ghozali, 2009). This study's descriptive statistical method is used to determine the state of investment for each PMA investment and PMDN investment in the area to be studied. From the results of this analysis, it will be known the distribution of investment in DIY, whether the distribution for each PMA investment and PMDN investment tends to be clustered or spread out.

Klassen typology is used to classify regions based on the investment. Klassen typology is an analytical tool used to find out about economic patterns and structures in each region. Klassen's typology analysis consists of two indicators: economic growth located on the vertical axis and the average per capita income located on the horizontal axis. In this study, Klassen's typology analysis divides the regions based on two indicators, namely economic growth on the vertical axis and the average investment per

capita on the horizontal axis. This was also carried out in previous research conducted by Briwantara (2015) which classified regions based on case study investments in Central Java. The method aims to determine areas with high investment to areas with low investment in DIY.

In order to determine the factors that influence investment, the panel data method is used. In this study, the researcher made two models, namely the PMA model in which PMA investment was the dependent variable and the second was the PMDN model where PMDN investment was the dependent variable. The equation in this study is made into two models with the aim of knowing more deeply and clearly, the factors that influence investment both from within the country and investment from abroad/foreign. The equation for the PMA model is as follows:

$$Y_1 it = \beta_0 + \beta_1 X_1\ it + \beta_2 X_2\ it + \beta_3 X_3\ it + \beta_4 X_4\ it + e\ it \dots\dots\dots(1)$$

Information :
Y_1 = PMA/ Foreign Direct Investment
β_0 = Intercept
$\beta_1 X_1$ = Labor force
$\beta_2 X_2$ = UMR/Regional Minimum Wage
$\beta_3 X_3$ = HDI/Human Development Index
$\beta_4 X_4$ = Local Tax
e   = error term/residual

The equation for the PMDN model is as follows:

$$Y_2 it = \beta_0 + \beta_1 X_1\ it + \beta_2 X_2\ it + \beta_3 X_3\ it + \beta_4 X_4\ it + e\ it \dots\dots\dots(2)$$

Information :
Y_1 = PMDN/Foreign Direct Investment

β_0 = Intercept
$\beta_1 X_1$ = Labor force
$\beta_2 X_2$ = UMR/Regional Minimum Wage
$\beta_3 X_3$ = HDI/Human Development Index
$\beta_4 X_4$ = Local Tax
e   = error term/residual

RESULTS AND DISCUSSION

In this study, descriptive statistical analysis was used to determine the distribution of investment. The data used are investment data of PMA and PMDN districts/cities in the Special Region of Yogyakarta which were analyzed in 2019, then a descriptive analysis was carried out using eviews 9. In descriptive statistics, the mean or average value that is smaller than the standard deviation value indicates that the data deviation is high, which means that the data distribution is uneven, and the average or mean value that is greater than the standard deviation indicates that data deviations have occurred falls into the low category, which means that the data distribution is evenly distributed (Barus and Leliani, 2013). The following table 1 are the results of descriptive statistical analysis to determine the distribution of data on the realization of foreign investment.

Table 1. Descriptive Statistics of PMA in DIY 2019

	N	Mean	Std. Deviation
PMA	5	1869191.	1901249

Source: Descriptive Statistics Results, eviews 9

The analysis results in table 1 show that the value of N or the amount of data for foreign investment is 5; that is, for five districts/in DIY, it has a mean value of 1869191 and has a standard deviation value of 1901249. From these results, it

is known that the mean value is smaller than the standard deviation value. The data deviation that occurs is high, which means that the distribution of values is not evenly distributed. The following is a map of the distribution of foreign investment in DIY.

Picture 2. Map of the Distribution of PMA in DIY
Source: Author 2020

From Picture 2, it can be seen that there are a concentration of foreign investment in Sleman Regency and Yogyakarta City, which is marked with dark brown color. Other districts in the area with the yellow map are areas that have an investment in the low PMA investment category. The uneven distribution of PMA investment occurs because of the concentration of investment value in a few regions.
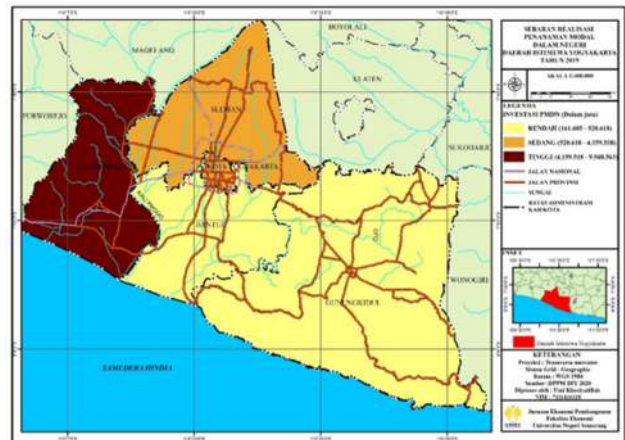
Some areas have a very high investment value, while other areas have a low investment value. The city of Yogyakarta has always been a mainstay place for investors to invest. Investment receipts in Yogyakarta City are very high when compared to other districts/cities. This has further widened the gap in foreign investment inequality in districts/cities in the Special Region of Yogyakarta.

Table 2. Descriptive Statistics of PMDN in DIY 2019

	N	Mean	Std. Deviation
PMDN	5	3449600.	3972223.

Source: Descriptive Statistics Results, eviews 9

Table 2 above are the results of descriptive statistical analysis to determine the distribution of data on the realization of domestic investment. The analysis results in table 2 show that the value of N or the amount of data for domestic investment is 5; that is, for five districts / in DIY, it has a mean value of 3449600 and has a standard deviation value of 3972223. From these results, it is known that the mean value is smaller than the standard deviation value. The data deviation that occurs is high, which means that the distribution of values is not evenly distributed. The following is a map of the distribution of domestic investment in DIY.

Picture 3. Map of the Distribution of PMDN in DIY
Source: Author 2020

From Picture 3, it can be seen that there are a concentration of domestic investment in Kulonprogo Regency, which is marked with dark brown color. Other districts in the area with the

light brown map and yellow map are areas that have an investment in the low PMDN investment category.

In fact, the unequal distribution of investment is a common thing. However, this is a development problem in particular, given that regions with low investment enter into regions that have low economic indicators as well. The categories included in regions with low economic indicators are regions with low HDI levels, low UMR levels, and low regional revenues from the tax sector.

The region with the lowest PMA investment and PMDN investment in DIY is in Gunungkidul Regency. This area is the district with the lowest regional minimum wage level when compared to other districts/cities. In addition to the low UMR, Gunungkidul Regency is also the area with the lowest HDI, the HDI value in Gunungkidul Regency is 69.96, which is quite a difference when compared to other districts/cities in DIY.

Gunungkidul Regency is also an area with low regional tax revenue as well. From this explanation, it can be interpreted that the regions that do not receive an adequate share of investment, in this case, are regions with a low investment, which is directly proportional to the low economic indicators in that area.

Inequality in investment distribution is one of the driving factors for development inequality. Investment has an important role in regional development efforts. The existence of investment in an area will help local governments in efforts to boost the economy in the region because of the large influence of investment in economic growth and development. This is in line with the idea issued by Harrod-Domar where he states that capital accumulation or investment is one of the important factors in the process of economic growth.

Investment has a dual role, namely as a production factor and as a factor that can increase production capacity. Investment will create multiple effects in an economy. Where these multi-effects will affect both directly and indirectly for the economy of a region. If investment does not increase, then growth will slow down.

The concentration of investment will cause differences in economic conditions, because regions with high investment in the long or short term will have high economic growth. Meanwhile, areas with low investment will find it difficult to develop. The increase or decrease in investment which is related to the economic growth of a region will affect the imbalance that occurs between regions. Therefore, local governments must continue to strive to attract investors.

Equitable distribution of capital or investment is an important effort to make so that development disparities that occur between regions do not widen. Because investment plays an important role in efforts to achieve equitable and equitable development. Economic development in a region requires investment to carry out production activities. So that the level of investment will affect the level of economic growth in an area. So that the role of investment both in the form of foreign investment and domestic investment is very important in an effort to build the economy of a region.

In this research, Klassen typology is used to divide the regions based on investment. The indicators used to determine the classification of regions are economic growth on the vertical axis

and investment per capita on the horizontal axis. The investment value per capita is obtained from the total investment divided by the number of population in each region. Per capita investment indicates the investment needs in each region, because basically the investment required in each region is not based on the number alone but also based on the volume of the area.

An area with a high population will have different investment needs when compared to an area with a low population. Because areas with a low population require less investment, even though the investment value is low, the investment needs on a per capita basis can be said to be sufficient. The results of Klassen's typology analysis for foreign investment are shown on table 3.

Table 3. Results of Klassen Typology of PMA 2019

QUADRANT I High Growth and High Investment	QUADRANT II High Investment but Low Growth
-	Yogyakarta City Sleman Regency
QUADRANT III High Growth but Low Investment	QUADRANT IV Low Growth and Low Investment
Kulonprogo Regency	Bantul Regency Gunungkidul Regency

Source: Result of Klassen Typologi

Based on table 3, the results of the analysis of foreign investment class typology between districts/cities in the Special Region of Yogyakarta in 2019 obtained regional classification results which can be interpreted there are no regencies / cities that are in Quadrant I, districts / cities that are in Quadrant I are regions that have high economic growth and high foreign investment as well.

Areas that are in Quadrant II, namely Yogyakarta City and Sleman Regency, districts / cities that are in Quadrant II are regions that have low economic growth but have high foreign investment. Areas in Quadrant III, namely Kulonprogo Regency, districts / cities that are in Quadrant III are areas that have high economic growth but have low FDI investment. Areas in Quadrant IV, namely Bantul Regency and Gunungkidul Regency, districts / cities that are in Quadrant IV are regions that have low economic growth and foreign investment.

The results of Klassen's typology show that there are areas in quadrant II, namely Sleman Regency and Yogyakarta City, which have a higher value of PMA investment per capita than the provincial PMA investment per capita; these findings also indicate that Sleman Regency and Yogyakarta City are regions, which received the most foreign investment compared to other districts in quadrants III and IV. Districts in quadrants III and IV have lower per capita investment in PMA than the province's per capita FDI investment.

This result is in accordance with the results of descriptive statistics, which show that the distribution of PMA investment in DIY is not evenly distributed and there is still a concentration of foreign investment in several regions then; in Klassen typology, it is more deeply known that the concentration of PMA investment in DIY is in Sleman Regency and Yogyakarta City. The results of Klassen's typology analysis for the PMDN are shown on table 4.

Based on table 4, from the results of the Klassen Typology analysis based on economic

growth and domestic investment the area that is in Quadrant I is Kulonprogo Regency, regencies/cities that are in Quadrant I are regions that have high economic growth and high PMDN. The area that is in Quadrant II is Yogyakarta City, districts/cities that are in Quadrant II are regions that have low economic growth but have high PMDN.

There are no districts/cities that are in Quadrant III, regencies/cities that are in Quadrant III are regions that have high economic growth but have low PMDN. Areas that are in Quadrant IV, namely: Sleman Regency, Bantul Regency, and Gunungkidul Regency, districts/cities that are in Quadrant IV are regions that have low economic growth and low PMDN.

Tabel 4. Results of Klassen Typology of PMDN

QUADRANT I High Growth and High Investment	QUADRANT II High Investment but Low Growth
Kulonprogo Regency	Yogyakarta City
QUADRANT III High Growth but Low Investment	QUADRANT IV Low Growth and Low Investment
-	Sleman Regency Bantul Regency Gunungkidul Regency

Source: Result of Klassen Typologi

The results of Klassen's typology show that there are areas in quadrant I, namely Kulonprogo Regency and quadrant II namely Yogyakarta City, which have a higher value of PMDN investment per capita than the provincial PMDN investment per capita; these findings also indicate that Kulonprogo regency and Yogyakarta city are regions which received the most domestic investment compared to other districts in quadrants III and IV.

Districts in quadrants III and IV have lower per capita investment in PMDN than the province's per capita PMDN investment. This result is in accordance with the results of descriptive statistics, which show that the distribution of domestic investment in DIY is not evenly distributed and there is still a concentration of domestic investment in several regions then; in Klassen typology, it is more deeply known that the concentration of PMDN investment in DIY is in Kulonprogo Regency and Yogyakarta City.

The results of the Klassen typology analysis for each PMA and PMDN investment show that there are investment concentrations in several districts/cities in DIY. Klassen typology analysis for the PMA investment model shows that there are districts that receive higher investment than other regions, namely Sleman Regency and Yogyakarta City. For the PMDN investment model, Kulonprogo Regency and Yogyakarta City are the regions that get the most PMDN investment compared to other districts. These results are in line with the results of descriptive statistics which state that the distribution of PMA investment and PMDN investment in DIY not evenly distributed, which is indicated by the constant concentration of PMA investment and PMDN investment in several regions.

The difference in the amount of investment in a region will cause inequality in investment between regions. Some of the reasons for the imbalance in investment between regions are the differences in natural and human resources owned between regions. In addition, there are several aspects that become a

consideration for investors in investing, not only regarding political and social stability in the regions but also including economic stability.

Political stability here includes good government including corruption, social stability includes the culture of the surrounding community which will be considered by investors in investing their capital. As well as economic stability which includes the financing sector and the labor market, which in this case is about wages and labor, and of course about economic growth in that area.

In addition, the condition of basic infrastructure, facilities and infrastructure, as well as the certainty of government policies related to investment such as regulations and taxation are also factor that cause investment disparities between regions in the Special Region of Yogyakarta. The following are the results of PMA Model Panel Data Regression.

Table 5. Chow Test

Effect Test	Statistic	d.f	Prob.
Cross-section F	16.695077	(4,16)	0.0000
Cross-section Chi-square	41.090037	4	0.0000

Source: Processed panel data with Eviews 9

The Chow test results above indicate that the p-value or probability f-statistic is 0.0000 < 0.05. The chi-square value is 0.0000 < 0.05. Based on the result, the best model is the Fixed Effect. The Hausman test is a test performed to determine the most appropriate model between FEM or REM. The Hausman test results above indicate that the p-value or probability of the Chi-square statistic or random Crossection is 0.0000 < 0.05. Deprived of the Hausman test, the best model chosen is the Fixed Effect.

Table 6. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	66.780309	4	0.0000

Source: Processed panel data with Eviews 9

From the PMA panel data regression results above, the estimation model is as follows:

$$PMA_{it} = 35015251 - 3.274409 \ LF_{it} + 3.423076 \ UMR_{it} - 476986.8 \ HDI_{it} + 1.012889 \ TAXES_{it} \quad \text{........(3)}$$

From the results of the above analysis, it can be seen that Labor force has a negative effect on foreign investment in the Special Region of Yogyakarta with a coefficient value of -3.274409. This means that if the number of labor force increases by one person, the foreign investment value will decrease by 3.274409 million rupiah. UMR has a positive effect on foreign investment in Yogyakarta with a coefficient value of 3.423076. This means that if the UMR value increases by one rupiah, the foreign investment value will increase by 3.423076 million rupiah.

HDI has a negative effect on foreign investment in the Special Region of Yogyakarta with a coefficient value of -476986.8. This means that if the HDI value increases by one percent, the foreign investment value will decrease by 476986.8 million rupiah. Local taxes have a positive effect on foreign investment in the Special Region of Yogyakarta with a coefficient value of 1.012889. This means that if Local Taxes increase by one million rupiahs, PMA investment will increase by 1.012889 million rupiah.

The t statistical test shows how much influence one independent variable has in

explaining the dependent variable's variation (partial). If the value of T count < T table. It can be said that the independent variable does not affect the dependent variable. If the value of T count > T table.

It can be said that the independent variable affects the dependent variable. The table above shows that the labor force has a value of t - statistic < t table, namely 1.171037 < 1.72472. This means that the Labor Force variable has an insignificant influence on PMA investment because the p-value of the labor force > α (α = 5%) is 0.2587 > 0.05. From these results, it can be concluded that the labor force variable has a negative and insignificant effect on foreign investment.

UMR has a value of t – statistic > t table, namely 3.790481 > 1.72472. This means that the UMR variable has a significant influence on FDI investment because the p-value of the UMR < α

(α = 5%) is 0.0016 < 0,05. From these results, it can be concluded that the UMR variable has a positive and significant effect on foreign investment. HDI has a value of t – statistic > t table, namely 2.820546 > 1.72472. This means that the HDI variable has a significant influence on FDI investment because the p-value of the HDI < α (α = 5%) is 0.0123 < 0,05. From these results, it can be concluded that the HDI variable has a negative and significant effect on foreign investment.

Local Taxes has a value of t – statistic < t table, namely 0.970231 < 1.72472. This means that the Local Tax variable has an insignificant influence on PMA investment because the p-value of the Local Tax > α (α = 5%) is 0.3464 > 0,05. From these results, it can be concluded that the Local Taxes variable has a negative and insignificant effect on foreign investment.

Table 7. Panel Data Regression

Dependent Variable: PMA				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	35015251	11926813	2.935843	0.0097
LABORFORCE	-3.274409	2.796161	-1.171037	0.2587
UMR	3.423076	0.903072	3.790481	0.0016
HDI	-476986.8	169111.5	-2.820546	0.0123
LOCAL TAX	1.012889	1.043968	0.970231	0.3464
R-squared		0.992449		
Adjusted R-squared		0.988674		
F – statistics		262,8688		
Prob (F-statistic)		0.000000		

Source: Output Eviews 9

The F statistical test explains whether the independent variables contained in a regression model have a simultaneous effect on the dependent variable. The prob value. The f-statistic is $0.000000 \leq 0.05$ and the f statistic < f table is 262.8688> 2.87. This shows that together the independent variables have an effect on the dependent variable. Then the variables of the Labor Force, UMR, HDI, and Local Taxes in the regression equation simultaneously or jointly have an effect on PMA in DIY.

Based on the table 7 above, the R-squared value is 0.992449. This means that the independent variables, namely the Labor Force, UMR, HDI, and Regional Taxes, in the model can explain the variables explain the dependent variable, namely PMA of 99.2%, and the remaining 0.8% others outside the models.

The final estimation result using panel data regression equation, in the PMA investment model, two independent variables have a significant effect on the dependent variable. These variables are UMR and HDI. UMR variable has a positive significant influence on PMA investment. This means that the increase in the UMR will still increase the PMA.

This is in accordance with previous research conducted by Setyoningrum (2018), which states that there is a positive relationship between wages and investment. This variable includes not only the effect of costs but also the effect of skills or skills. Investors assume the increase in UMR in DIY to get a workforce with better quality human resources and skills so that it will increase productivity, which in turn will increase profits for investors.

The number of the labor force working for the tertiary sector in DIY is not as much as the number of the labor force working in other sectors. Meanwhile, most of the foreign investment in DIY falls into the tertiary sectors, which are not labor-intensive. These sectors are quite technical sectors requiring specific manpower so that investors do not mind paying higher wages because they get skilled and specific workers. Foreign investment in DIY does not receive a lot of workers but only receives specific workers; higher wages are directly related to labor productivity.

HDI has a negative and significant relationship to PMA investment. This means that an increase in HDI will cause a decrease in foreign investment. This result is not in line with the research conducted by Meirinaldi (2014), which found positive and insignificant results between HDI and investment in DKI Jakarta. This is different from the results of this study because the realization of PMA investment in DIY is dominated by the tertiary sector, which reached 72.25%, which mainly came from the accommodation and food and drink provision sector with investment realization of IDR 16.46 billion (Bank Indonesia, 2019), and of course, the labor needed is HR with expertise in the sector.

However, most of the people in DIY work in the agriculture, forestry and fisheries sectors as well as the wholesale and retail sectors; Car repair and maintenance data is obtained from the Percentage of the Working Population by Main Employment (BPS DIY 2019). From this, it can be concluded that the existing employment opportunities are not in accordance with the quality of human resources owned by the DIY community so that the increase in HDI will lead to a decrease in foreign investment or vice versa, because of the mismatch of the quality of Human Resources with the labor requirements in the available jobs.

The laborforce has a negative and insignificant relationship with foreign

investment in the Special Region of Yogyakarta. The insignificance of the influence of the workforce on PMA investment shows that the increase or decrease in the number of the workforce cannot be ascertained to be able to increase or decrease the value of foreign investment. These results are in line with research conducted by Pratama, Salsiyah, and Wahyuni (2013) which states that the workforce has no significant influence on foreign investment in Central Java.

Local taxes have a positive and insignificant relationship with foreign investment in DIY. The insignificant results here differ from the research conducted by Nkem and Sunday (2019) which states that there is a positive relationship between taxes and foreign investment. Foreign investors do not consider local taxes in determining their place to invest in DIY. This is due to the existence of tax incentives that will help reduce the effects of the high tax rate. So, the level of investment is not a consideration for foreign investors to invest in DIY. The following are the results of PMDN Model Panel Data Regression Estimation to determine the factors that influence domestic investment.

Table 8. Chow Test

Effect Test	Statistic	d.f	Prob.
Cross-section F	4.188820	(4,16)	0.0165
Cross-section Chi-square	17.911886	4	0.0013

Source: Processed panel data with Eviews 9

The Chow test results above indicate that the p-value or probability cross section Chi-square is 0.0013 < 0,05. Based on the result, the best model chosen is the Fixed Effect.

Table 9. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.755279	4	0.0022

Source: Processed panel data with Eviews 9

The Hausman test results above indicate that the p-value or probability of the Chi-square statistic or random Crossection is 0,0022 < 0,05. Deprived of the Hausman test, the best model chosen is the Fixed Effect. From the PMDN panel data regression results above, the estimation model is as follows:

$$PMDNit = -1.84E+08 - 44.20718\ AKit - 4.336209\ UMRit + 2699118.\ HDIit + 1.632178\ TAXESit \dots\dots\dots(4)$$

From the results it can be seen that Labor Force has a negative effect on PMDN investment in the Special Region of Yogyakarta with a coefficient value of -44,20718. This means that if the number of labor force increases by one person, the investment value of PMDN will decrease by 44,20718 million rupiah.

UMR has a negative effect on PMDN investment in the Special Region of Yogyakarta with a coefficient value of -4.336209. This means that if the UMR value increases by one rupiah, the PMDN investment value will decrease by 4.336209 million rupiah.

HDI has a positive effect on PMDN investment in the Special Region of Yogyakarta with a coefficient value of 2699118. This means that if the HDI value increases by one percent, the value of PMA investment will increase by 2699118.

Local taxes have a positive effect on PMDN investment in the Special Region of Yogyakarta with a coefficient value of 1.632178. This means that if Local Taxes increase by one million rupiahs, PMDN investment will increase by 1.632178 million rupiahs.

Table 10. Panel Data Regression

Dependent Variable: PMDN				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.84E + 08	1.21E + 08	-1.51297	0.1498
LABORFORCE	-44.2072	2,322,562	-1.90338	0.0751
UMR	-4.33621	7.804054	-0.55564	0.5861
HDI	2699118	1799421	1.499992	0.1531
LOCAL TAX	1.632178	4.22429	0.386379	0.7043
R-squared	0.634856			
Adjusted R-squared	0.452285			
F – statistics	3,477,298			
Prob (F-statistic)	0.01621			

Source: Output Eviews 9

The table above shows that the labor force has a value of t - statistic > t table, namely 1.903380 > 1.72472. This means that the Labor Force variable has a significant influence on PMDN investment because the p-value of the labor force < α (α = 10%) is 0.0751 < 0,10. From these results, it can be concluded that the labor force variable has a negative and significant effect on domestic investment.

UMR has a value of t – statistic < t table, namely 0.555635 < 1.72472. This means that the UMR variable has an insignificant influence on PMDN investment because the p-value of the UMR > α (α = 10%) is 0.5861 > 0,10. From these results, it can be concluded that the UMR variable has a negative and insignificant effect on domestic investment.

HDI has a value of t – statistic < t table, namely 1.499992 < 1.72472. This means that the HDI variable has an insignificant influence on PMDN investment because the p-value of the HDI > α (α = 10%) is 0.1531 > 0,10. From these results, it can be concluded that the HDI variable has a positive and insignificant effect on domestic investment.

Local Taxes has a value of t – statistic < t table, namely 0.386379 < 1.72472. This means that the Local Tax variable has an insignificant influence on PMDN investment because the p-value of the Local Tax > α (α = 10%) is 0.7043 > 0,05. From these results, it can be concluded that the Local Taxes variable has a positive and insignificant effect on domestic investment.

The f-statistic is 0.016210 ≤ 0.05 and the f statistic <f table is 3.477298 > 2.87. This shows that together the independent variables have an effect on the dependent variable. Then the variables of the Regional Force, UMR, HDI, and Local Taxes in the regression equation

simultaneously or jointly have an effect on PMDN in DIY.

Based on the table above, the R-squared value is 0.634856. This means that the independent variables, namely the Labor Force, UMR, HDI, and Local Taxes, in the model can explain the variables explain the dependent variable, namely PMDN of 63,5% and the remaining 36,5% others outside the model.

The final estimation result using panel data regression equation, in the PMDN model there is one independent variable that has a significant effect on the dependent variable, this variable is the labor force. The labor force variable has a negative and significant effect on domestic investment. This means that an increase in the Labor Force will cause a decrease in PMDN.

This study's results are in accordance with research conducted by Yulida, T., B, S A., Adry, M R (2019), which states a negative relationship between the labor force and investment. Accumulated capital expenditures used to purchase sophisticated machinery or equipment also hamper efforts to create jobs because most industries are capital intensive so that many workers cannot be absorbed in existing jobs. In addition, a large number of the workforce will not necessarily increase company productivity.

The Labor Force has a negative and significant relationship to PMDN investment in the Special Region of Yogyakarta. These results reject H_0 and accept H_1, namely that the labor force has a significant effect on PMDN investment in DIY. This means that when the number of labor force increases, the PMDN investment in DIY will decrease. The results of this study are in accordance with the research conducted by Yulida, T., B, S A., Adry, MR (2019)

which states a negative relationship between labor and investment. Accumulated capital expenditures used to purchase sophisticated machinery or equipment also hamper efforts to create jobs because most industries are capital intensive, so that many workers cannot be absorbed in existing jobs.

Local Tax has a positive and insignificant effect on PMDN investment in the Special Region of Yogyakarta. The insignificant effect of local taxes on domestic investment has differences with the results of research conducted by Dewi, P K., N (2015) which states that there is a significant relationship between local taxes and investment. The insignificant relationship in this thesis shows that the fluctuation of local taxes does not necessarily affect domestic investment in the Special Region of Yogyakarta.

Investment is very important for the economy of a region, some of the variables used in this study are variables that have an effect on foreign investment and domestic investment in DIY. The labor force variable does not have a significant effect on PMA investment, while for PMDN investment, the labor force has a significant effect. The UMR variable is not significant for PMDN, but the UMR has a positive relationship with PMA investment. HDI has a significant effect on PMA investment but does not have a significant effect on PMDN investment. The local tax variable does not have a significant effect on both PMA investment and PMDN investment. For investment as a whole has a distinctive character.

There are several factors that become a consideration for investors to invest in an area. These considerations include existing natural and human resources, availability of facilities

and infrastructure, as well as government intervention in generating the existing investment climate in the regions. In addition, the conditions and culture of the local people will be a consideration for investors to invest, both in the form of foreign investment and domestic investment.

PMA investment is still concentrated in Yogyakarta City and Sleman Regency, other districts have not yet focused on receiving PMA. Efforts are needed to increase the HDI score in areas with a low HDI with the hope that PMA can enter the area because areas with a low HDI have low PMA investment, namely Bantul, Gunungkidul, and Kulonprogo Regencies.

Most of the foreign investment that enters DIY is a special sector that requires a skilled and specific workforce, so that the quality of human resources in an area will affect the entry of foreign investment. PMDN investment is still centered in Kulonprogo Regency, other districts in DIY need to improve the quality of the workforce to match the PMDN investment needs, because most of the PMDN investment that goes to DIY is investment in the tertiary sector, namely warehouse transportation and communication.

Most of the industries are capital intensive, so that a lot of workers cannot be absorbed in the existing jobs. In addition, the large number of labor force will not necessarily increase the productivity of the company, so it is necessary to make efforts to improve the quality of the workforce in DIY to suit the needs of available jobs.

CONCLUSION

The distribution of investment, both in the form of foreign investment and domestic investment in DIY, tends to be concentrated. In 2019, PMA investment in districts/cities in the Special Region of Yogyakarta has a mean value of 1869191 and has a standard deviation value of 1901249. From these results, it is known that the mean value is smaller than the standard deviation value.

The data deviation that occurs is high, which means that the distribution of values is not evenly distributed. Meanwhile, PMDN has a mean value of 3449600 and has a standard deviation value of 3972223. From these results, it is known that the mean value is smaller than the standard deviation value. The data deviation that occurs is high, which means that the distribution of values is not evenly distributed.

Regional classification based on foreign investment in DIY, three districts still lack foreign investment namely Kulonprogo Regency, Bantul Regency, and Gunungkidul. Meanwhile, Yogyakarta City and Sleman Regency are regions with high foreign investment. Then for the classification of regions based on PMDN investment in DIY, there are three regions that still lack PMDN investment namely Sleman Regency, Bantul Regency, and Gunungkidul Regency. Meanwhile, Yogyakarta City and Kulonprogo Regency have a high investment value for PMDN. Of the five districts/cities, only Yogyakarta City has an investment above the DIY average, both for PMA investment and PMDN investment.

Based on the results of panel data regression estimates, it can be seen that the UMR and IPM have a significant effect on foreign investment. UMR has a positive relationship with PMA investment, and HDI has a negative relationship with PMA investment. The variables of the labor force and local taxes are not significant to foreign investment. For the PMDN investment model, the labor force has a

negative and significant relationship with PMDN investment. The variables of UMR, IPM, and Local Taxes are not significant for PMDN investment.

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