Determinants of Investment in District/City Province of Central Java

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Abstract

The purpose of this study was to analyze the determinants of investment in Central Java in 2014-2018, classifying each district / city in Central Java based on investment realization, and the factors influencing investment in Central Java. The variables used in this study are Investment, Labor, HDI, Regional Minimum Wage and CPI. The data used in this study are cross section and time series data from 2014-2018 sourced from DPMPTSP and BPS. The method used in this study is Klassen Typology and Multinomial Logistic Regression. The results showed that: (1) Factors affecting investment, namely the labor variable significantly influence investment. (2) In the classification of developed regions fast-growing factors affecting investment are the labor and regional minimum wages, then for the classification of developed regions depressed factors affecting investment namely the labor and the classification of potential areas of fast developing factors affecting investment namely the labor and HDI. (3) The classification accuracy is 47.4% and the model is suitable but the classification has a low value. The government must implement policies that are pro-investment and strengthen the specialization of each region. Future researchers' recommendations are expected to use more complete predictor variables that are not used in this study which might improve classification accuracy.

Keywords: *Determinant, Investment, Klassen Typology, Multinominal Logistic Regression*

Abstrak

Tujuan penelitian ini adalah menganalisis determinan investasi di Jawa Tengah tahun 2014-2018, mengelompokkan setiap kabupaten / kota di Jawa Tengah berdasarkan realisasi investasi, dan faktor-faktor yang mempengaruhi investasi di Jawa Tengah. Variabel yang digunakan dalam penelitian ini adalah Investasi, Tenaga Kerja, HDI, Upah Minimum Regional dan IHK. Data yang digunakan dalam penelitian ini adalah data cross section dan time series tahun 2014-2018 yang bersumber dari DPMPTSP dan BPS. Metode yang digunakan dalam penelitian ini adalah Tipologi Klassen dan Regresi Logistik Multinomial. Hasil penelitian menunjukkan bahwa: (1) Faktor yang mempengaruhi investasi yaitu variabel tenaga kerja berpengaruh signifikan terhadap investasi. (2) Dalam klasifikasi daerah maju faktor pertumbuhan cepat mempengaruhi investasi adalah tenaga kerja dan upah minimum daerah, kemudian untuk klasifikasi daerah maju faktor tertekan yang mempengaruhi investasi yaitu tenaga kerja dan klasifikasi daerah potensial faktor cepat berkembang mempengaruhi investasi yaitu tenaga kerja dan HDI. (3) Akurasi klasifikasi adalah 47,4% dan model sudah sesuai tetapi klasifikasi memiliki nilai yang rendah. Pemerintah harus melaksanakan kebijakan yang pro investasi dan memperkuat spesialisasi masing-masing daerah. Rekomendasi peneliti selanjutnya diharapkan dapat menggunakan variabel prediktor yang lebih lengkap yang tidak digunakan dalam penelitian ini yang dapat meningkatkan akurasi klasifikasi.

Kata Kunci: Determinan, Investasi, Tipologi Klassen, Regresi Logistik Multinomial

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PENDAHULUAN

The existence of economic policy reforms in Indonesia has made the level of investor confidence in Indonesia increase. Now is the right time to increase investment. The potential of different regions based on the characteristics of each region causes different economic growth. High or low economic growth of a regency/city will have an impact on the high and low level of regional economic growth at the top level (Mayanti, Susi, 2015: 32).

It is important for every country to attract as much investment as possible, not only underdeveloped and developing countries but also developed countries. Various kinds of efforts are made by a country so that investment can enter as much as possible (Situmorang, 2014: 5). The important role of investment in economic development is that investment is one of the final components in the macroeconomic perspective which is an indicator of internal balance in the situation of market balance and reflects the business world because the source of investment is the business world. The important role of investment makes it the engine of growth and economic development (engine of growth) (Situmorang, 2014: 4).

Regional inequality and development can affect economic development. This is indicated because there is an inequality in the amount of investment. So it takes a long time to resolve this imbalance (Sirojuzilam, 2008: 37).

Since the enactment of regional autonomy, the role of regional governments to develop their regions is better with the hope that all people will get prosperity and prosperity. However, the ability of local governments in developing each region is certainly different, this

is due to differences in the potential of an area. The entry of investment will greatly provide a good impact on the development of an area, it is necessary for the government's role in efforts to attract investors to come. According to Harrod-Domar explained that investment has a positive correlation with the rate of economic growth. If investment in a region is not developed, then economic growth in that area is likely to be left behind compared to other regions that are able to attract investors (Soekarni, 2010: 9).

The role of investors in investing is not to meet the needs of goods and services but to seek profit (Sukirno, 2006). These benefits can motivate investors to invest their capital in areas that are considered to have a profitable investment value. The more investment activities carried out will increase the need for labor for the production process and benefit the people of the area. Central Java is a province that is considered strategic for investors to invest their capital. The development of this investment sees from other indicators including human development index, gross regional domestic product, exchange rate, government spending and interest rates in Central Java. This increase in investment can directly influence economic growth in the region.

Looking at the data from table 1, the realization of foreign investment and domestic investments in Java in the last 5 years Central Java Province appears to lag behind DKI Jakarta, West Java, Banten and East Java with a total investment of 195 trillion rupiah in 2014-2018 lagging far behind the Province West Java, which ranks first with a total investment of 533 trillion rupiah. The realization of investments entering Central Java is only higher than the Special Region of Yogyakarta.

Regional disparity is a common phenomenon that occurs in the economic activities of a region. An area has different characteristics such as differences in natural resources, differences in demographic conditions, centralized economic activity in an area (agglomeration), and accompanied by lack of smooth mobility of goods and services. It is also caused by human resources, economic growth can go forward together with an educated workforce (Shindo, 2010). These differences have implications for the ability of an area to increase economic growth and encourage differences in the development process, so that it will create developed region and underdeveloped region (Sjafrizal, 2014: 107).

Table 1. Realization of Foreign Direct Investment and Domestic Investment by Province in Java in 2014-2018 (In Million Rupiah)

Province	2014	2015	2016	2017	2018
DKI Jakarta	71.375.506,02	63.983.621,22	57.438.038,72	108.762.377,4	116.535.439,7
West Java	96.672.304,6	103.125.366	106.727.261,6	107.223.842,2	119.653.270,2
Banten	32.248.889,18	44.752.284,14	51.178.721,3	55.930.036,17	57.887.613,87
Central Java	**19.106.004,22**	**26.799.245,89**	**37.787.647,3**	**51.619.848,42**	**60.414.182,47**
Special Region of Yogyakarta	1.474.801,67	1.555.591,33	1.209.424,64	783.120,74	7.260.922,31
East Java	59.542.635,75	70.220.529,1	71.161.224,58	66.013.416,47	51.843.937,85

Source: BPS, Indonesian Statistics

The phenomenon of inequality that occurs in Central Java province becomes interesting to study, because the comparison between the growth rates of the Central Java Province's GRDP is lowest in Java, but the Williamson Index tends to be high which ranks second highest of all provinces in Java.

Central Java Province itself is divided into 29 districts and 6 cities, namely Semarang City, Magelang City, Pekalongan City, Tegal City, Surakarta City and Surakarta City. Each region in Central Java Province has a different investment attractiveness. The distribution of domestic investments in Central Java Province in the last 5 years seems uneven, Cilacap Regency is the highest region to receive capital accumulation of 16.76% of the total domestic investment in Central Java, then Wonogiri Regency with 8.71% and Grobogan Regency with 8.22%. This condition illustrates that there is a lack of domestic investment allocation in Central Java Province.

The distribution of foreign investment in Central Java Province also appears to be uneven, Cilacap Regency is the highest receiving capital accumulation of 50.85% of the total foreign investment in Central Java from 2014 to 2018. Then Jepara Regency amounted to 23.68%, while other districts/cities were still very lacking in the allocation of foreign investment. The linkage of regions that have high investment with areas that have little investment will cause a socioeconomic gap that can cause various problems. Inequality can be influenced by differences in economic growth in developed and disadvantaged regions (Wahyuntari, 2018:

298). The regional autonomy policy was launched to encourage regional governments to increase independence so that they were able to solve various problems faced by the region because they were more aware of their regional needs (Muin, Fatkhul, 2014: 71). Investment has been proven empirically as a factor driving economic growth in Indonesia (Maryaningsih, 2014: 94).

Government spending and export consumption is also a source of economic growth, not just investment. However, the influence of investment is greater and stronger on economic development compared to other sources of growth (Soekarni, 2010: 11). This is supported by research (Prasetyo, 2009) regarding the effect of investment on economic growth in Central Java. Capital accumulation or investment is stated as the main factor driving economic growth. This has been confirmed since from neoclassical economic development theories to contemporary economic development theories (Sarungu, 2008).

There are several factors that affect the entry of investment into an area, one of which is the development of the availability of human resources and the quality of human resources as the manpower or the engine that drives the economy in Central Java Province from 2014-2018 as follows :
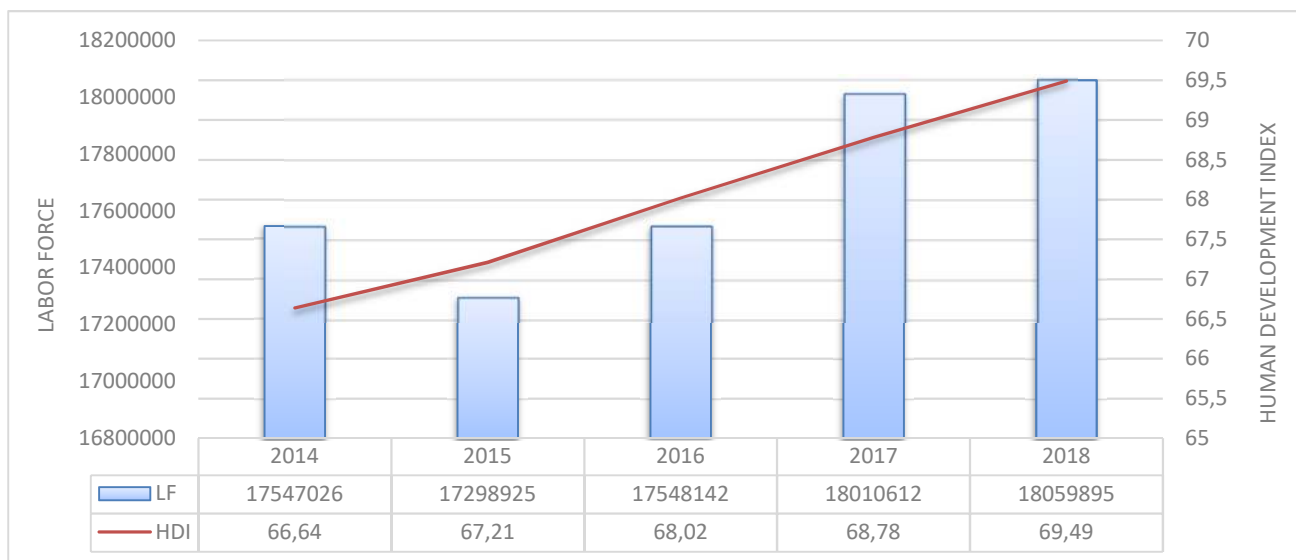
Picture 1. Total Labor Force and Human Development Index of Central Java Province in 2014-2018
Source : BPS Province of Central Java

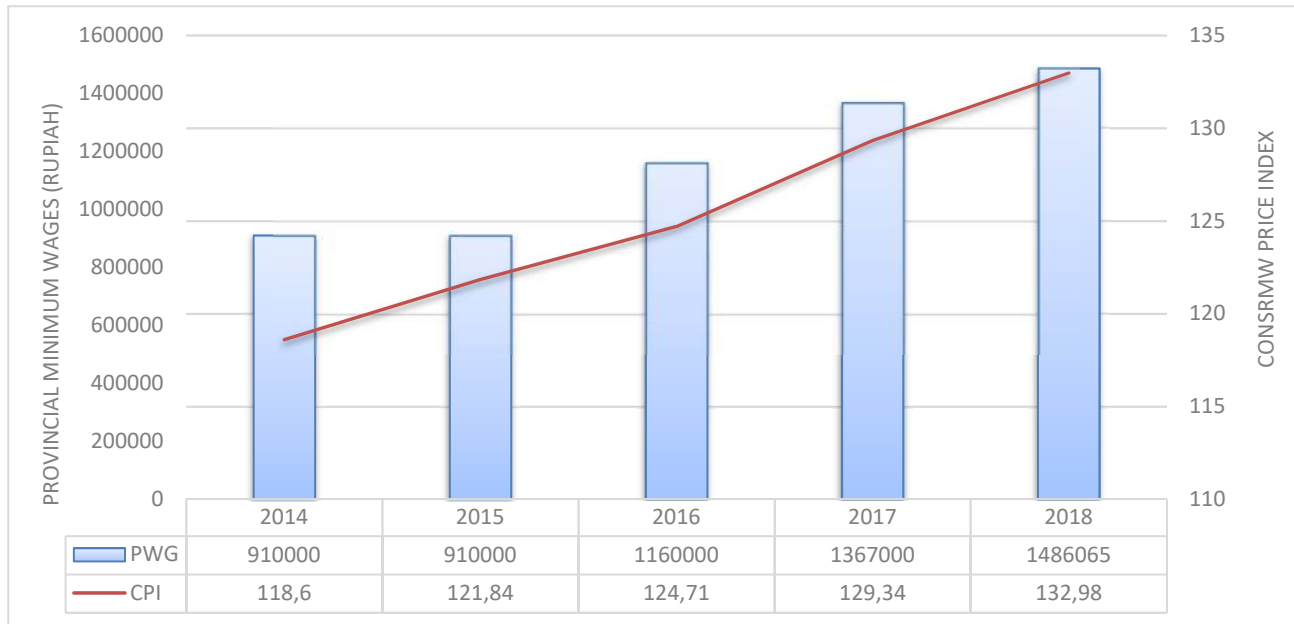|	2014	2015	2016	2017	2018
LF	17547026	17298925	17548142	18010612	18059895
HDI	66,64	67,21	68,02	68,78	69,49

Picture 1 data shows the availability of labor force in Central Java Province in 2014 to 2018 decreased in 2015 accompanied by the development of the human development index in Central Java Province each year continues to increase, it can be interpreted that the quality of human resources in the Province Central Java continues to experience improvements. The availability of a good workforce and the quality of the workforce can affect the entry of investments, because an investor will need a local or native workforce with good quality in running his company.

In addition, investors also consider the salary burden that will be issued to obtain a workforce. With the Regional Minimum

Wage policy set in PP No. 78 stated that the size of the minimum wage should not be below the UMP, being a factor influencing an investor in choosing a region, following the development of the UMP in Central Java Province in 2014-2018.

	2014	2015	2016	2017	2018
PWG	910000	910000	1160000	1367000	1486065
CPI	118,6	121,84	124,71	129,34	132,98

Picture 2. Provincial Minimum Wages and Central Java Consumer Price Index for 2014-2018
Source : BPS Province of Central Java

In the data Picture 2 shows the development of the provincial minimum wage continues to increase causing an increase also in regional minimum wage standards as in PP regulation No. 78. While the development of the Consumer Price Index in 2014 to 2018, people's purchasing ability has always increased. Apart from the availability of the workforce, the quality of the workforce, minimum wages and purchasing power is thought to also be able to influence investment in Central Java Province. Regional expenditure which is posited to the realization of capital expenditure which has a function to improve the education, health and transportation sectors can give an influence to an investor to make investments in the area.

In April 1946, Evsey Domar published an article on economic growth entitled "Capital Expansion, Rate of Growth, and Employment". The article does not discuss long-term economic growth, but discusses the relationship between short-term recession and investment in the United States. (Easterly, William, 1997: 2) explains how the Domar (Harrod-Domar) model survived the crisis in the 1950s. Economists apply it to poor countries from Albania to Zimbabwe to determine the "mandatory" level of investment for growth. The difference between the required investment and their own savings is the financing gap. This is not about the long-term relationship between investment and growth, but about a model that promises the growth of poor countries in the short term

through aid and investment.Domar's approach to growth is popular because it has a simple prediction that is, GDP growth will be proportional to investment expenditure in GDP (Easterly, William, 1997:2).

The economy is closed, the desire to save (MPS = s) is constant, the production process has a constant coefficient (constant return to scale), The growth rate of the labor force (n) is constant and equal to the rate of population growth.

$$g = k = n \dots\dots\dots\dots\dots\dots\dots\dots(1)$$

Information :
g : *Growth*
k : *Capital*
n : Growth rate of the labor force

On the basis of these specific assumptions, Harrod-Domar made an analysis and concluded that long-term growth can only be achieved if the conditions of the balance are met (Tarigan, 2005: 49).

Location theory is a science concept with a fairly broad scope of analysis which includes analysis of the location of economic activities. Walter Christaller explains how the arrangement of city magnitude, number of cities, and their distribution within a region, in this model Chirstaller uses a geometry system of numbers 3 defined by the arbiter has a very meaningful role this is called the K = 3 system of Christaller (Tarigan, 2005: 124).

According to Leo Klassen (1981) Klassen typology is used to find a picture of the pattern and structure of economic growth in each region. Klassen's typology basically divides regions based on two main indicators, namely regional economic growth and regional per capita income (Emilia, 2006: 55). Then the observed regions are divided into four classifications, namely: (1) developed and fast-growing regions; (2) developed but depressed regions; (3) growing regions and (4) relatively stagnant regions.

RESEARCH METHODS

The type in this research uses a quantitative approach. The dependent variable in this study is the classification of investment areas, which is information about the total realization of foreign investment and domestic investment and then it will be classified in a good condition or vice versa based on Klassen's typology. In this study, the independent variables used were 4 (four) variables, namely: Labor force variables (X_1), Human Development Index Variables (X_2), Regional Minimum Wage Variables (X_3), and Consumer Price Index Variables (X_4).

The data used in this study are secondary data in the form of pooled data or panel data that combines time series data for the 2014-2018 period and cross section data in 35 districts/cities in Central Java Province. Secondary data in this study were obtained through documents published by relevant sources.

To solve the problem and answer the research objectives as described previously, this research uses several analytical methods. Klassen's typology to classify which areas still lack investment. Then proceed by using the multinomial logistic regression method to find out what factors influence investment in Central Java.

The Klassen typology used in this study is the comparison of each regency and city using the average per capita investment and the rate of

economic growth. There are four typologies that explain the position of a region in the Klassen Typology analysis, namely: (1) Developed regions are growing rapidly, namely regions that have growth and investment rates higher than the average. (2) Developed but depressed regions are regions that have low growth rates but have investments above the average. (3) Potentially fast developing regions are regions that have high growth rates, but have low investment below the average. (4) Relatively disadvantaged regions are regions that have low growth rates and investments below the average. From the results of the analysis, each Regency / City was coded 1, 2, 3, or 4 according to the position of the region concerned.

Klassen's typological analysis is obtained by regions with 4 classifications, namely: fast-growing and fast-growing regions, developed but depressed areas, fast developing regions, and relatively disadvantaged areas. The result becomes the D4 variable in the multinomial logistic regression model.

To analyze the effect of the human development index, the regional minimum wage and the consumer price index on the investment position of a region are in a position: fast forward and fast growing, depressed forward, developing fast and relatively lagging behind using analysis that can distinguish the economic position. Estimation is done through several scenarios by trying to use different data according to operational definitions. The model used is a multinomial logistic regression model, with model specifications modified from the model used (Kuncoro, 2001) as follows:

$$D4 = \beta_0 + \beta_1 TK + \beta_2 IPM + \beta_3 UMR + \beta_4 IHK \ ....(2)$$

D4	:	Regions with economic positions: D1 = high growth and high invesment, D2 = low growh but high invesment , D3 = high growth but low investment, D4 = low growth and low investment
LF	:	the amount of labor force availability with soul units
IPM	:	human development index with units of percent
RMW	:	regional minimum wage in rupiah units
IHK	:	consumer price index by percent
$\beta_{0...n}$	:	estimated parameter

The logistic regression method is expressed in a probability model which is a model in which the dependent variable is the logarithm of the probability that an attribute will apply under conditions of certain independent variables. To test the significance of the coefficients of the model that has been obtained, then the following hypothesis test is performed. Partial test is used for individual testing which shows whether an independent variable is significant or feasible to enter the model or not. To test it used the Wald test Hosmer and Lemeshow, in (Field, 2009) with a hypothesis as below :

H_0 : $\beta_j = 0$ (koefisien β_j not statistically significant)

H_1 : $\beta_j \neq 0$ (koefisien β_j statistically significant), $j = 1, 2, 3,...p$

The Wald test statistical calculation is as follows :

$$W = \frac{\beta_j}{SE\left(\beta_j\right)}$$

Where β_j is a parameter estimator β_j and SE (β_j) is a standard error estimator of β_j, p is the number of predictor variables. H_0 rejected if the test statistic value W $\geq Z_{\alpha/2}$ and if p-value $\leq \alpha$ (0.05) which means β_j has a significant effect on the response variable.

RESULTS AND DISCUSSION

The typology of Klassen in this study was used to classify areas with low investment in Central Java Province. The following is the result of typology analysis between districts / cities in Central Java Province as shown in Table 2 below:

Table 2. The Results of Typology of Investment Class in Central Java Province 2014-2018

Quadrant I	Quadrant II
High Growth and High Invesment	Low Growth but High Investment
1. Semarang City	1. Cilacap Regency
2. Semarang Regency	2. Kudus Regency
	3. Batang Regency
	4. Jepara Regency
	5. Wonogiri Regency
Quadrant III	**Quadrant IV**
High Growth but Low Investment	Low Growth and Low Investment
1. Surakarta City	1. Magelang City
2. Tegal City	2. Salatiga City
3. Blora Regency	3. Pekalongan City
4. Tegal Regency	4. Purbalingga Regency
5. Kendal Regency	5. Purworejo Regency
6. Pati Regency	6. Wonosobo Regency
7. Pemalang Regency	7. Magelang Regency
8. Brebes Regency	8. Klaten Regency
9. Banjarnegara Regency	9. Temanggung Regency
10. Banyumas Regency	10. Pekalongan Regency
11. Sragen Regency	11. Grobogan Regency
12. Sukoharjo Regency	12. Demak Regency
13. Boyolali Regency	
14. Kebumen Regency	
15. Rembang Regency	
16. Karanganyar Regency	

Source : Data Result

The results of the Klassen typology analysis based on economic growth and investment results obtained in the district / city quadrant as in table 2, the four quadrant classification can be interpreted as follows: Regions with high economic growth and high domestic investment (quadrant I), namely: Semarang City and Semarang Regency; Regions with low economic

growth but have high domestic investment (quadrant II), namely: Cilacap Regency, Kudus Regency, Batang Regency, Jepara Regency and Wonogiri Regency.

Regions with high economic growth but have low domestic investment (quadrant III), namely: Surakarta City, Tegal City, Blora Regency, Tegal Regency, Kendal Regency, Pati Regency, Pemalang Regency, Brebes Regency, Banjarnegara Regency, Banyumas Regency, Regency Sragen, Sukoharjo Regency, Boyolali Regency, Kebumen Regency, Rembang Regency and Karanganyar Regency;Areas with low economic growth and low domestic investment (Quadrant IV), namely: Magelang City, Salatiga City, Pekalongan City, Purbalingga Regency, Purworejo Regency, Wonosobo Regency, Magelang Regency, Klaten Regency, Temanggung Regency, Pekalongan Regency, Grobogan Regency and Demak Regency .

There are still many districts / cities in Central Java Province included in quadrant IV meaning that many districts / cities in Central Java Province still lack investment.

Descriptive statistics are often called deductive statistics which discuss how to encapsulate a set of data in an easy-to-read form and quickly provide information presented in tables, graphs, or concentrations and distributions. The following is a description of the regional classification of 35 districts / cities in Central Java in 2014-2018.

Referring to the results in appendix 2 shows that from 175 regional classification data in 35 regencies / cities in Central Java in 2014-2018 showed the highest classification was in relatively disadvantaged areas by 40.6% with a number of 71, the classification of potential areas developed rapidly by 39.4 % with a total of 60,

the classification of developed regions grew rapidly by 11.4% with a number of 20, and the classification of developed regions was depressed by 8.6% with a number of 15.

To find out the correlation between investment with several variables that are considered influential, an independence test is used. Next is the independency test between investments and variables that are thought to be influential.

Table 3. Independence Test Results

Variabel	Df	χ^2 count	χ^2 table	P-value	Decision
Intercept	3	2,528	7,815	0,470	-
LF	3	15,817	7,815	0,001	Have a significant effect
IPM	3	7,722	7,815	0,052	No significant effect
RMW	3	6,039	7,815	0,110	No significant effect
IHK	3	5,249	7,815	0,154	No significant effect

Source : Data Result

Table 3 shows that the labor force variable (LF) has a value χ^2 count which is greater than χ^2 table and P-value which is smaller than 0,05 which means a significant effect so it can be concluded that with a confidence level of 95% there is a correlation between district / city investment in Central Java in 2014-2018 with the labor force (LF) and the human development index (HDI).

Information is obtained that the variable human development index (HDI) regional minimum wage (RMW) and the consumer price index (CPI) has a value of χ^2, which is smaller than χ^2 tables and P-value greater than 0.05, which means not significant so it

can be concluded that with a confidence level of 95% there is no correlation between regency / city investment in Central Java in 2014-2018 with regional minimum wage (RMW) and consumer price index (CPI).

The response variable in this study is the investment in regencies / cities in Central Java in 2014-2018 which are divided into 4 categories, namely fast-growing, depressed forward, potentially developing fast, and relatively lagging behind. The predictor variables used are variables that have a correlation with the response variable, namely the labor force (LF), human development index (HDI), regional minimum wage (RMW), and consumer price index (CPI). Predictor variables that have a significant

influence on district / city investment in Central Java.

The hypothesis used in simultaneous testing shows that the G value of 38.508 is greater than the value of χ^2 tables which is 21,026 and the P-value of 0,000 is smaller than 0.05 which means Reject H_0 so it can be concluded that with a confidence level of 95% there is at least one variable that has a significant effect on district / city investment in Central Java. Simultaneous testing of investment in districts / cities in Central Java resulted in Decline H_0 so that it could proceed to partial testing. Individual parameters using the Wald Test to find out the significance of the predictor variable parameters for investment in the Regency / City in Central Java individually.

Table 4. Partial Test Results (Wald Test)

Logit	Predictor Variable	B	Wald	P-value	Odds Ratio
Fast Growing Forward	Intercept	-1,689	0,026	0,871	
	LF	0,000	10,536	0,001	1,000
	IPM	0,135	3,137	0,077	1,145
	RMW	0,000	4,823	0,028	1,000
	IHK	-0,138	3,335	0,068	0,871
Pressed Forward	Intercept	-7,452	0,735	0,391	
	LF	0,000	7,370	0,007	1,000
	IPM	0,084	1,049	0,306	1,087
	RMW	0,000	0,826	0,363	1,000
	IHK	-0,036	0,409	0,523	0,965
Potential Flourish Quick	Intercept	-6,358	2,267	0,132	
	LF	0,000	4,901	0,027	1,000
	IPM	0,126	6,548	0,010	1,135
	RMW	0,000	0,003	0,956	1,000
	IHK	-0,027	1,526	0,217	0,973

Source : Data Result

Based on test statistics and referring to the results in Appendix 7, using the category of regional classification relative to the comparison of estimated parameters between the labor force (LF), human development index (HDI), regional minimum wage (RMW), and consumer price index (CPI) can seen in table 4.

Table 4 shows that the significant variables in the fast growing regional classification category are the labor force (LF) and the regional minimum wage (RMW) then in the stressed regional classification category only the labor force variable (LF) is significant, whereas in the potential area classification category developing rapidly shows that significant variables namely the labor force (LF) and the human development index (HDI) can be obtained by the multinomial logistic regression function model as follows:

$$g_1(x) = -1{,}689 + 0{,}000LF_1 + \mathbf{0,135HDI_z}$$
$$+ 0{,}000RMW_3 - \mathbf{0,138CPI_4}$$
$$g_2(x) = -7{,}452 + 0{,}000LF_1 + \mathbf{0,084HDI_z}$$
$$+ \mathbf{0,000RMW_3} - \mathbf{0,036CPI_4}$$
$$g_3(x) = -6{,}358 + 0{,}000LF_1 + 0{,}126HDI_z$$
$$+ \mathbf{0,000RMW_3} - \mathbf{0,027CPI_4}$$

* bold type for insignificant variables

From the two logit functions, the probability of investment in the Regency / City in Central Java for each category is as follows:

$$\pi_1(x) = \frac{expg_1(x)}{1 + expg_1(x) + expg_2(x) + expg_3(x)}$$

$$\pi_2(x) = \frac{expg_2(x)}{1 + expg_1(x) + expg_2(x) + expg_3(x)}$$

$$\pi_3(x) = \frac{expg_3(x)}{1 + expg_1(x) + expg_2(x) + expg_3(x)}$$

$$\pi_4(x) = \frac{1}{1 + expg_1(x) + expg_2(x) + expg_3(x)}$$

Based on the four logit functions, it can be used to form a probability function for each of the classification categories of regency / city investment areas in Central Java on the labor force (LF), human development index (HDI), regional minimum wage (RMW) and consumer price index (CPI). The logit type of investment in 35 regencies / cities in Central Java is as follows:

$$\pi_1(x) = \frac{expg_1(-1{,}692)}{1+expg_1(-1{,}692)+epg_2(-7{,}404)+expg_3(-6{,}259)x} = 0{,}155$$

$$\pi_2(x) = \frac{expg_2(-7{,}404)}{1+expg_1(-1{,}692)+epg_2(-7{,}404)+expg_3(-6{,}259)x} = 0{,}000513$$

$$\pi_3(x) = \frac{expg_2(-6{,}259)}{1+expg_1(-1{,}692)+epg_2(-7{,}404)+expg_3(-6{,}259)x} = 0{,}001612$$

$$\pi_4(x) = \frac{1}{1+expg_1(-1{,}692)+epg_2(-7{,}404)+expg_3(-6{,}259)x} = 0{,}843$$

Information:

$\pi_1(x)$ = the probability function for the investment category towards growing fast

$\pi_2(x)$ = the probability function for the distressed investment category

$\pi_3(x)$ = the probability function for the potential investment category is growing rapidly

$\pi_4(x)$ = the probability function for the investment category is relatively lagging behind

The following results show that the opportunity to invest in developed regions is growing fast by 0.843 greater than the other classification of the classifications of the labor force, human development index, regional minimum wage, and consumer price index.

Table 5 shows that the Pearson value obtained is 529,546 which is smaller than the value of χ^2_{table} of 550.602 and P-value of 0.266

which is greater than 0.05 which means that it is significant so it can be concluded that with a 95% confidence level the model produced has been according or no difference between the predicted and observation results.

After testing its suitability, then the obtained model is calculated for its classification accuracy to determine the probability of error made by the model. The classification accuracy obtained by the model can be seen in table 5.

Table 5. Model Suitability Test Results

	Uji Ratio Likelihood			
	Chi-Square	Df	χ^2_{tabel}	P-value
Pearson	529,546	510	550,602	0,266
Devians	378,489	510	550,602	1,000

Source : Data Result

Table 6. Model Classification Accuracy

Observasi	Prediction				Accuracy (%)
	Fast Growing Forward	Pressed Forward	Potential to Develop Fast	Relatively Lagging Behind	
Fast Growing Forward	5	0	10	5	25%
Pressed Forward	2	0	8	5	0%
Potential to Develop Fast	1	0	36	32	52,2%
Relatively Lagging Behind	1	0	28	42	59,2%
Overall Accuracy	5,1%	0%	46,9%	48%	47,4%

Source : Data Result

Based on the results in table 6 shows the classification accuracy of the model that has been formed that is equal to 47.4% which means the number of predictions that are precisely classified according to observations (real conditions) is 47.4% and the resulting misclassification is 52.6 %. The number of observations of classification of fast growing areas that are precisely predicted in the classification of fast growing regions is 25%, indicating that 75% of the categories of fast-growing regions is wrong in their classification and predicted in other categories. Likewise, in the advanced category, it is stressed that only the right classification is 0% and 100% the

advanced category is stressed incorrectly in the classification.

Furthermore, in the fast developing potential category the classification accuracy of 52.2% shows that 47.8% of the fast developing potential category is wrong in the classification and can be translated into other categories. And finally, the relatively behind regions classified as 59.2% shows that 50.8% of the categories of regions are relatively wrong in classifying and predicted into other categories.

Klassen's Typology Results of the spread of investment in 2018 only a few regions that have investment above the average, namely Cilacap Regency, Boyolali Regency, Sukoharjo Regency,

Grobogan Regency, Rembang Regency, Demak Regency, Semarang Regency, Karangnyar Regency, and Kudus Regency. While other districts / cities have investments below the average, this shows the concentration of investment concentration in 2018 is in these districts / cities.

The results of this study are in accordance with research (Aswandi, Hairul, 2002) entitled evaluation of the determination of the mainstay area. Many factors can cause investment inequality between regions, the lack of equitable facilities and infrastructure as investment support facilities, differences in natural and human resources as important factors in production, less than optimal government performance in generating investment climate, investment-related policies and the culture of the local community that quite influences investors to choose the investment area.

Investment can be influenced by economic and non-economic factors, lack of equitable facilities and infrastructure as investment support facilities, differences in natural resources and human resources as important factors in production, less than optimal government performance in generating investment climate, investment-related policies and the culture of the local community that sufficiently influences investors to choose investment areas.

It is very important to know what factors can encourage investment in both foreign and domestic investment. In this study, researchers used the experimental method, the only research method that really tested the hypothesis regarding causal relations (Kuncoro, 2013). Allows the researcher to control the relevant independent variables and monitor whether the bound variable hypothesized is influenced by it.

The final estimation results using multinomial logistic regression equations, in the model there are 1 independent variables that have a significant effect on investment as the dependent variable. Both partially and jointly, the independent variable is the Work Force which has a positive influence.

Economic Growth is an indicator that illustrates the economy of a region, economic growth that continues to increase can encourage the confidence of investors to conduct investment activities or invest their capital in the area. These results are in accordance with research conducted by (Rizal, 2018) entitled the analysis of the effect of labor and the exchange rate on domestic investment.

The labor force has a positive and significant impact because the labor force is a reflection of the strength of production capacity, so the labor force is the most important factor in production activities, because labor is a very economically active population and can potentially produce goods and services. If there is an increase in the number of workers then it can increase production capacity. Increased production capacity will also make an increase in investment.

In contrast to research conducted by (Ranis, Stewart, & Ramirez, 2000) entitled economic growth and human development, with the result that HDI has a positive and significant effect on direct investment in Indonesia. HDI does not have a significant influence on investment in Central Java because HDI is assumed investors will get workers who have more quality and skills that do not necessarily increase productivity and profits of investors,

instead workers will demand more wages. While the regional minimum wage has no significant effect on investment in Central Java. This is different from the research conducted by (Qahfi, 2018) entitled the analysis of factors affecting investment in the Province of South Sulawesi, with the result that the RMW has a significant effect on investment in the Province of South Sulawesi but does not have a significant effect in Central Java Province due to investors look at other aspects.

In a study conducted by (Irzan, Hekmatiyar 2019) entitled the analysis of the influence of the consumer price index, population, exchange rate and gross regional domestic product on investment in the province of East Java it is appropriate that the CPI has no significant effect on investment in Central Java because the CPI becomes the measure of inflation that is most closely watched by policy makers when choosing monetary policy. Because the relative increase in inflation is a negative signal for investors (Karlina, 2017).

The high inflation rate will cause an increase in the company's production costs. An increase in the company's production costs causes an increase in the price of domestic goods and a decline in the profitability of a company which will then reduce the distribution of dividends and the purchasing power of the people against shares also decreases. In the end it has an impact on company performance and a decline in stock prices. For a country, a good economic situation is generally represented by a relatively low and controlled inflation rate (Hidayat & Salim, 2013).

CONCLUSION

Work Force Variable (AK) influences each regional classification and investment in 35 Regencies / Cities in Central Java Province in 2014-2018; The Human Development Index Variable (HDI) influences the classification of potential areas to develop rapidly but does not affect investment in 35 Regencies / Cities in Central Java Province in 2014-2018; Regional Minimum Wage Variable (UMR) influences the classification of fast-growing regions but does not affect investment in 35 regencies / cities in Central Java Province in 2014-2018; The Consumer Price Index variable (CPI) does not affect each regional classification and investment in 35 Regencies / Cities in Central Java Province in 2014-2018.

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