CHAPTER V

RESEARCH FINDINGS

This research uses panel data, to know the impact of Local original revenue, Government's expenditures, Population and Fiscal Decentralization on the Economic growth of D.I Yogyakarta period 1996-2015. Data processing is using software EViews 7.

A. Model Estimation

This test is conducted to find the most appropriate model to be used in the econometric analysis. Model estimation test is done two ways, namely Chow Test and Hausman Test.

1. Chow Test.

One of the steps in determining the best model in panel data research is by doing Chow Test. Where is the comparison between Common Effect Model (PLS) with Fixed Effect Model (FEM).

TABLE 5.1

The Result Chow Test

Test Summary	Statistic	d.f	Prob
Cross-section F	63.148170	(4,91)	0.0000
Cross-section Chi-square	132.859737	4	0.0000

Source: data processed

From Chow test, the result shows that Prob. value F of 0.0000. So it is found that the value of Prob. F = 0.000 <0.05. The conclusion with at 95% confidence level that fixed effect model (FEM) is better used in this research.

Can be proved by the calculation of F-statistics and F-table of Chow test:

$$F = \frac{0{,}612583 - 0{,}133395/(5-1)}{0{,}133395\ /(100-5-4)} = 81{,}772$$

For calculation F table as follows:

F-table = {α : df (5 – 1, 100 – 5 – 4)}

α 5% = df (4,91)

= (2.47)

From the above hypothesis it can be concluded that F statistic is bigger than F table (81.772> 2.47), thus H_0 is rejected, assuming that the best model used in this research is fixed effect model (FEM).

2. **Hausman Test.**

To find the panel data used, the Hausman Test can compare fixed effect model (FEM) with random effect model (REM).

TABLE 5.2

The Result Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f	Prob
Cross-section random	252.592678	4	0.0000

Source: data processed

The Hausman test shows that the value of Prob. Cross section random of 0.0000, so it is found that the value Prob. Cross-section = 0.0000 < 0.05. This test follows Chi-square distribution with Hypothesis:

H_0: Random Effect Model better than fixed effect model

H_1: fixed effect model better than Random effect model

Thus it can be concluded that H_0 is rejected which means a more appropriate model used is a fixed effect model.

From the test results of Chow Test and Hausman Test can be concluded that a more appropriate model is used to analyze the impact of local original revenue, government expenditure and population and fiscal decentralization on economic growth of D.I Yogyakarta is using fixed effect model (FEM).

B. Classical Assumption Test

Based on Gujarati and porter (2009) in conducting classical assumption testing, this research uses OLS method which is more suitable with linear regression equation of fixed effect model.

The assumption test used in linear regression with Ordinary Least Squares (OLS) approach includes the test of Normality, Multicollinearity, and Heterokedastistas.

1. Normality Test.

Normality test in this study was conducted by Jarque-Berra test technique with the following results:

TABLE. 5.3

Test Result of Jarque-Bera Normality Test

Jarque-Berra	Probability	Note
1.84136	0.398248	Normal

Source: data processed

Normality test is required to know the form of data distribution, whether normal or abnormal. In this study normality test conducted using Jarque-Bera (JB test). The result of the analysis shows that the value of Prob. Jarque-Bera of 0.398248 is greater than alpha 0.05. Thus it can be concluded that the data is normally distributed.

From the histogram above the JB value of 0.398248 while the value of chi-square by looking at the number of independent variables, which we use in this study 4 variables and significant values at alpha 5%. Obtained a value of chi-square of 132.859737 which means the value of JB is smaller than the value of chi-square (0.398248 <132.859737). So it can be concluded that the data in this study normal distribution.

2. Multicollinearity Test.

TABLE. 5.4

The Result of Multicollinearity Test

	X1	X2	X3	X4
X1	1.00000	0.89326	0.18171	0.4702
X2	0.89326	1.00000	0.23913	0.07987
X3	0.18171	0.23913	1.00000	-0.1999
X4	0.4702	0.07987	-0.1999	1.00000

Source: data processed

Multicollinearity test is used to determine whether there is a relationship between independent variables in this study. The results of the analysis show that the coefficient between the independent variables < 0.9 which means that there is no multicollinearity in each independent variable.

From the table above can be seen the value of correlation coefficient between independent variables smaller than 0.9 Thus the data in this research does not occur multicollinearity problems.

3. Heteroscedasticity Test.

TABLE 5.5

The Result of Heteroscedasticity Test

Variable	Coefficient	Std. Error	t- Statisic	Prob
C	-0.256348	0.526354	-0.487026	0.6274
X1	0.011022	0.025124	0.438713	0.6619
X2	-0.025768	0.023072	-1.116872	0.2670
X3	0.071132	0.09601	0.740879	0.4607
X4	0.000584	0.000861	0.678631	0.4991

Source: data processed

This result is assumed that there is no heteroscedasticity, due to the value of probability is greater than the value of alfa (0.05).

C. Statistical Test

Research with data processing conducted with software EViews 7 and to perform testing of panel data model, where obtained the result of regression equation:

$$LogY = 6.198893 + 0.248722\ LogX_{1it} - 0.066626\ LogX_{2it} - 0.181811\ LogX_{3it} + 0.004380\ X_{4it} + u$$

TABLE 5.6
The Regression result of fixed effect model (FEM)

Code	Variable	Coefficient	Std.Error	t-statistics	Prob.
C	Constants	6.198893	0.867568	7.145134	0.0000
X1	Local original revenue	0.248722	0.041411	6.006218	0.0000
X2	Government's expenditures	-0.066626	0.038028	-1.75201	0.0831
X3	Population	-0.181811	0.15825	-1.148885	0.2536
X4	Fiscal Decentralization	0.00438	0.00142	3.085424	0.0027
R^2		0.968722			
F-Statistics		352.297			
N		5			

Source: data processed

From the results of this regression can be concluded that the results of statistical tests as follows:

1. **Partial Test (Uji t).**

   The indication or size for the t-test in this research to find out the independent variables (local original revenue, government's expenditures, population and fiscal decentralization) have a relationship to GRDP. With 5% confidence level and df (5-4) = 1, it is found that t table that is 12.71 can be concluded that:

   a. **The impact of local original revenue on economic growth.**

      Based on the result of FEM regression explained that Local original revenue has partial regression coefficient value of 0.248722 with the t-statistic value of 6.006218 and the probability

value of 0.0000, because of probability value < 0.05. Indicates that the probability level of 0.0000 is smaller than 0.05. Hence, local original revenue has a positive impact and significant on economic growth.

b. The impact of government's expenditure on economic growth.

Based on the results of FEM regression explained that government's expenditure has partial regression coefficient value of -0.066626 with the t-statistic value of -1.752010 and the probability value of 0.0831, because of probability value > 0.05. Indicates that the probability level of 0.0831 is greater than 0.05. Hence, government's expenditures has a negative impact and insignificant on economic growth.

c. The impact of Population on economic growth.

Based on the results of FEM regression explained that population has partial regression coefficient value of -0.181811 with the t-statistic value of -1.148885 and the probability value of 0.2536, because of probability value > 0.05. Indicates that the probability level of 0.2536 is greater than 0.05 Hence, population has a negative impact and insignificant on economic growth.

d. The impact of Fiscal Decentralization on economic growth.

Based on the results of FEM regression explained that fiscal decentralization has partial regression coefficient value of 0.004380 with the t-statistic value of 3.085424 and the probability value of

0.0027, because of probability value < 0,05. Indicates that the probability level of 0.0027 is smaller than 0.05. Hence, fiscal decentralization has a positive impact and significant on economic growth.

2. Simultaneous Significant Test F.

Based on the results of FEM regression obtained that f-statistic equal to 352.2970 where its value less than t-table 735.569 at confident level 5%. It is said that f-statistic < f-count then H_o is rejected and H_1 accepted, it means there is the impact of independent variable together on dependent variable simultaneously.

3. Coefficient of Determination (R^2).

The coefficient value of R^2 is 0.968722, which means that 96.87% of the dependent variable (economic growth) can be explained by the independent variable (local original revenue, government's expenditure, population, and fiscal decentralization) and the remainder is explained by other variables not included in the model.

D. The Regression of each districts/cities

Then can be made the model of panel data analysis to factors influencing economic growth in every district/city D.I Yogyakarta.

TABLE 5.7

The Area's Effect of Districts/Cities on Economic Growth

District/cities	Regression Equation
Kulonprogo	-0.272676359951 + 0.248722253637*X1 -0.0666261682887*X2- 0.181811178744*X3 + 0.00438006842124*X4
Bantul	0.0551150002021+ 0.248722253637*X1 - 0.0666261682887*X2 - 0.181811178744*X3 + 0.00438006842124*X4
Gunung Kidul	0.0424251345965 + 0.248722253637*X1- 0.0666261682887*X2 - 0.181811178744*X3 + 0.00438006842124*X4
Sleman	0.187884921486 + 0.248722253637*X1 - 0.0666261682887*X2 - 0.181811178744*X3 + 0.00438006842124*X4_4
Yogyakarta	-0.0127486963338 + 0.248722253637*X1 - 0.0666261682887*X2 - 0.181811178744*X3 + 0.00438006842124*X4

In the above estimation model, it can be seen that the impact of the different cross-section in each district/city of D.I Yogyakarta on the economic growth. The district with positive cross-section impact is Sleman district with the coefficient value of 0.187884921486, Bantul district with the coefficient value of 0.0551150002021, Gunung Kidul district with the coefficient value of 0.0424251345965. While the districts with negative cross-section impact is Yogyakarta city with the coefficient value of 0.0127486963338 and Kulonprogo district with the coefficient value of 0.272676359951.

The negative effect of Yogyakarta and Kulonprogo on economic growth is due to the crisis of 1997 which is Economic growth slowed quite dramatically compared to other districts. In this situation the two districts/ city of D.I Yogyakarta are unable to sustain their economy by slowing economic growth to 11 percent and 29 percent.

Kulonprogo district is a large area and has the least population in DIY, so the population of Kulonprogo district has not been able to manage its natural resources efficiently with the largest contribution of economy is the agriculture sector. Therefore it caused the number of poor people in Kulonprogo. Similarly, Yogyakarta city which has a population almost equal to Kulonprogro but has the smallest area in the province of D.I Yogyakarta, So it can be said that with an area of only 1.02 percent of the total area of D.I Yogyakarta, Yogyakarta city has a fairly high population density. Therefore, in times of crisis the increase of unemployment in Yogyakarta City caused by the available job field only few with dense population.

E. Discussion and Results

This research was conducted to determine the impact of local original revenue, government's expenditures, population and fiscal decentralization on economic growth of 5 Districts/cities D.I Yogyakarta. The test results have shown that the regression model is already free from classical assumptions. Discussion on testing each variable as follows;

1. The impact of Local Original Revenue on Economic Growth.

Based on the results of tests that have been done, it can be seen that the local original revenue has a positive impact and significant on economic growth of D.I Yogyakarta. This means that the higher the number of local revenue, it will increase economic growth of D.I Yogyakarta. It can be seen on the results of the partial test (t-test) which shows that the local original revenue has a positive coefficient value of 0.248722 and a value of significance smaller than 0.05 that is equal to 0.0000. That means that every 1% increase in local original revenue will increase the total output (GRDP) of districts/cities in D.I Yogyakarta by 0.248722 rupiahs.

Accordance with the hypothesis is the local original revenue has a positive impact and significant on economic growth. Thus, it is acceptable and supported by facts. The relationship of local original revenue with economic growth, while accordance with previous research from Harianto (2007) where local original revenue is a source of regional expenditure, if local original revenue increases then the

funds owned by local government will be higher and the level of regional independence will Increase too, so that local governments will take the initiative to further explore the potentials of the region and increase economic growth.

The results of this research are also in line with the research of Pujiati (2007) and Setiyawati (2007) which is the local original revenue has a positive and significant impact on economic growth. However, this research does not support research conducted by Febrian (2014) and Khilyati (2016), Shows that the local revenue has a negative impact and insignificant on economic growth. This is because the output area reflected on the PDRB generated by various sectors has not run optimally.

2. The Impact of Government's Expenditures on Economic Growth.

Based on the results of tests that have been done, it can be seen that the government expenditure has a negative and insignificant on the economic growth D.I Yogyakarta. This means that the higher government spending, it will decrease on economic growth D.I Yogyakarta. It can be seen on the test results of the partial test (t-test) which shows that the population has a negative coefficient of -0.181811 and significance value greater than 0.05 that is equal to 0.0831. That means that any 1% increase in government spending will decrease the total output (GRDP) of districts/cities in D.I Yogyakarta by 0.066626 rupiahs.

Accordance with the hypothesis is the government's expenditures have a positive impact and significant on economic growth. This is not in accordance with the hypothesis because of government's expenditures have a negative impact and insignificant on economic growth.

This situation can be explained in Wagner's Law, which is a positive correlation between government expenditure and national income level. Nevertheless, the large increase in government expenditure is not necessarily good for economic activity. The development that occurs in this area is exclusive development, the development only benefits exclusive groups and development that happens not qualified because it does not take into account the growth (pro-growth), the absorption of labor (pro-job), reduce poverty (pro-poor) and pay attention to the environment (pro-environment).

The results of this research are in line with Khilyati (2016) that shows a negative relationship between government expenditure and economic growth. This is because the inefficiency of government expenditure on development, as well as large government expenditures, especially from consumption expenditure, will actually reduce the growth of income per capita.

According to Barro and Salla-I Martin (1995) in Osborn (2007), government expenditure is divided into productive and non-productive expenditures. Productive spending if the expenditure has a direct effect

on economic growth, but most studies on the relationship between government's expenditure and economic growth assume all government spending is productive.

The district/city's government of D.I Yogyakarta still had not allocated its expenditure well. Because of the size of the Budge plan of government expenditures districts/cities D.I Yogyakarta shows that routine spending is greater than development expenditures, this will have an impact on economic growth indirectly. Due to the insufficient government allocation function required to provide public goods which cannot be provided by the private sector. Government's expenditures on capital goods are deemed necessary. Judging from a large number of years expected the government can allocate funds to effectively and efficiently.

This is not supported by Saragih (2009), Sodik (2007) and Zainuddin (2016) studies that government spending has a positive and significant impact on economic growth. Government expenditure is intended to increase the region's assets, such as roads, buildings, land, and others. As well as providing public goods to the society, it means that government expenditures will directly affect development activities in the area. Because of the development process itself needs the role of society is also accompanied by government policy in regulating the existing regional resources.

3. The Impact of Population on Economic Growth.

Based on the results of tests that have been done, it can be seen that the number of the population has a negative and insignificant on economic growth D.I Yogyakarta. This means that the more population in D.I Yogyakarta, it will decrease economic growth D.I Yogyakarta. It can be seen on the test results of the partial test (t-test) which shows that government expenditure has a negative coefficient of -0.181811 and significance value greater than 0.05 that is equal to 0.2536. That means that every 1% increase in population will decrease total output (PDRB) of district / city in DIY equal to 0.181811 rupiahs.

Accordance with the hypothesis is the population has a positive impact and significant on economic growth. This is not in accordance with the hypothesis because of the population has a negative impact and insignificant on economic growth.

Supported by research of Tjahjanto Saptomo (2008) and Zainuddin (2016) that the cause of the number of people who have no impact on economic growth due to the distribution of factors of production (capital) on uneven economic growth and the level of population that work/produces only half of the population in a district/city of Yogyakarta. Unproductive populations are more than productive populations led to a lack of growth in purchasing power and potential consumers in buying goods and services.

In contrast to the research of Khilyati (2016) and Ahmad (2012) showed that the population has a positive impact and significant on economic growth.

4. The Impact of Fiscal Decentralization on Economic Growth.

Based on the results of tests that have been done, it can be seen that fiscal decentralization has a positive impact and significant on economic growth D.I Yogyakarta. This means that the higher the implementation of fiscal decentralization, it will increase economic growth D.I Yogyakarta. It can be seen on the test results of the partial test (t-test) which shows that fiscal decentralization has a positive coefficient value of 0.004380 and significance value smaller than 0.05 that is 0.0027. This means that every 1% increase in fiscal decentralization will increase the total output (GRDP) of districts/cities in DIY by 0.004380 rupiahs. But the impact on the economy is still very small. The impact of the implementation of fiscal decentralization in the districts of D.I Yogyakarta on macroeconomic and social conditions shows relatively good results although not yet optimal.

The small degree of fiscal decentralization is also directly influenced by the small local original revenues. From the government side, it should be more optimize the sources of local revenue owned. Innovation and creativity of the region are very necessary so that the local original revenue component of the region that becomes the concentration of local government not only comes from local tax n

local retribution. The problem that causes the weakness of local original revenue is only utilizing less than 20% regional owned enterprises (BUMD). Local governments should be able to optimize Regional Owned Enterprises (BUMD) so that regional income sources are very varied.

Accordance with the hypothesis is the fiscal decentralization has a positive and significant impact on economic growth. Thus, it is acceptable and supported by facts. This is in accordance with research of Hadi Sasana (2009) and Idham Khalid (2015), Decentralization has a direct impact on high economic growth if fiscal decentralization is centered on public expenditure. Fiscal decentralization as measured by local government spending leads to significant economic growth in the regions. In the era of fiscal decentralization with the transfer of funds from the central government and wide authority to the region to manage and optimize the existing economic potentials to give a positive effect on regional economic growth.

The results of this research are in accordance with the theory of fiscal decentralization. According to Oates (1993), fiscal decentralization will be able to increase economic growth and public welfare because local governments will be more efficient in the production and supply of public goods. Decision-making at the local government level will be more heard diversify local choices and more useful for the efficiency of allocation. Fiscal decentralization in

developing countries if they do not adhere to the standards of decentralization theory, the results may be detrimental to economic growth and efficiency.

Regional autonomy can give effect to the economic growth of a region. With the implementation of regional autonomy, districts/cities in the province of D.I Yogyakarta are given the authority to increase economic growth by utilizing resources freely to be allocated to the existing economic sectors.