ANALYSIS OF TOTAL POPULATION, GOVERNMENT SPENDING AND GROSS REGIONAL DOMESTIC PRODUCT (GRDP) INFLUENCE TOWARDS LOCAL REVENUE (PAD)

(Case Study in Districts/Cities in Riau Province on Period 2010 to 2014)

Muhammad Yusuf

International Program for Islamic Economics and Finance
Muhammadiyah University of Yogyakarta
St. Lingkar Selatan, Tamantirto, Kasihan, Bantul, Yogyakarta
Email: ucupthomas@rocketmail.com

ABSTRACT

This study aims to analyze the effect of Total Population, Government Spending and Gross Regional Domestic Product (GRDP) towards Local Revenue in 12 Districts/Cities in Riau Province in 2010-2014. This Study uses a quantitative approach. The research data were secondary data from 12 Districts/Cities in Riau Province in 2010-2014. The analysis model was data panel analysis with Fixed Effect Model. The results showed that Total Population has no effect to Local Revenue. While, Government Spending and Gross Regional Domestic Product (GRDP) have positive significant effect to Local Revenue.

Keywords*: Local Revenue, Total Population, Government Spending, Gross Regional Domestic Product (GRDP).*

RESEARCH BACKGROUND

With the implementation of governance reforms in the form of regional autonomy in every county and city in Indonesia, then each region is expected to be ready in facing the implementation of regional autonomy by the central government as responsible for the implementation of the reform. Implementation of Regional Autonomy implemented with the support of personnel, equipment, and adequate financing. In the Constitution of Republic of Indonesia number 32 of 2004 explained that Regional autonomy is the devolution of government power from central government to autonomous regions to organize and manage the system of government in the Republic of Indonesia.

One indicator to measure the level of local capacity to implement regional autonomy is the Local Revenue (PAD). Regional Autonomy itself can have a positive impact for the district / city that has the potential of natural resources, but not so with the district / city are poor in natural resources, which is one of the problems facing the government district / city in general is limited funding originating from the region itself (PAD), so that the process of regional autonomy has not been able to run as it should (Aziz in Datu K., 2012).

Local Revenue is the essential partner in the implementation of Development, because the funds used are owned by the local government itself. So the government has the authority to manage the fund. The local government is also responsible for managing the funds derived from local revenues, obtained from the local communities who have the right to get back the funds in the form of development in the area. According to the study (Datu K, 2012) explained that the Local Revenue (PAD) is based on article 157 paragraph a of Law Number 32 Year 2004 on Central Government suggests that local governments in taking care of their own household needs to be given the sources of income or receipts of local finance for finance all activities within the framework of the implementation of the tasks of administration and development for the welfare of society as a fair and equitable, that component is derived from the results of local taxes, levies Results, wealth management area results that are separated and Other Local Revenue results are valid.

Variables that can be controlled are the variables and institutional policies set by local governments, including the initial conditions of a region, increased expansion and the intensification acceptance of Local Revenue (PAD), the procurement of new development, the search for new sources of revenue, regulatory changes and tariff adjustments. While the variables, that cannot be controlled are the macro variables to be

studied by the author, such as, population, government spending and Gross Regional Domestic Product (GRDP).

Riau is a Developing Province in Sumatra that has a lot of potential in all aspects such trade aspect, management of industry, agriculture and tourism. All of these aspects can support economic growth in Riau. There are 12 areas. The twelfth Districts / cities in Riau can increase the income of the area, which later twelfth the area can be independent by utilizing the aspects mentioned above in each district / city. So that local governments could no longer rely on the revenues from the central government and the results can be directly felt by the local community.

The level of acceptance in Riau, make them as the top three Provinces in Sumatra with the largest number of admissions. Thus, the authors assume that the amount of revenue can be increased more for the implementation of economic development in Riau Province. And it also will affect Local Government to boost revenues of the Districts/Cities in Riau Province.

Research Purpose

So, from the problem formulation above, we conclude there are several purposes from the research, such as:

1. To analyze the effect of Total Population towards Local Revenue (PAD) in the districts/cities Riau Province on 2010-2014.

2. To analyze the effect of Government Spending towards Local Revenue (PAD) in the districts/cities Riau Province on 2010-2014.

3. To analyze the effect of Gross Regional Domestic Product (GRDP) towards Local Revenue in the districts/cities Riau Province on 2010-2014.

RESEARCH METHODOLOGY

1. Object of Research

This study is aimed at districts / cities in Riau Province. Pekanbaru municipal elections as the study area due to facilitate the collection of data, in addition Pekanbaru is the capital of Riau province.

2. Types of Data

The data used in this study are primary and secondary quantitative method which is the time series data from 2010-2014. About the Local Revenue (PAD), Total Population, Government Spending and Gross Regional Domestic Product (GRDP) is obtained from the Office of the Department of Revenue, the Central Statistics Agency (BPS) Riau, literature-literature / books and reports related to this writing.

3. Data Collecting Technique

Data collecting was done in this study by way author proposes permit research to agencies associated with this author in a study area, after being given permission research and obtain the data required, and then the data will be processed and used as materials analysis to prove the hypothesis that has been put forward.

4. The Variables Operational Definition of Research

a. Local Revenue (PAD)

A source of local revenue derived from the results of local taxes, levies result, the results of companies belonging to the region and other areas of wealth management results were separated and others Local Revenue (PAD) legitimate in Riau Province. Unit in thousand rupiah, data is taken from the Central Statistics Agency of Riau Province 2010-2014.

b. Total Population

The number of people whos lives in Riau Province. Data is taken from the Central Statistics Agency of Riau Province 2010-2014.

c. Government Spending

The Expenditure that include the government sector and purchase of goods and services. Which used for the payment of subsidies which implements the functions of government. Government Spending data is taken from the Central Statistics Agency of Riau Province 2010-2014.

d. Gross Regional Domestic Product (GRDP)

The total value of production of goods and services produced in the region (regional) within a certain specified time (one year) in the province of Riau. Data is taken from the Central Statistics Agency of Riau Province 2010-2014.

5. Analysis Method

This study uses panel data. Panel data regression is used to answer the purpose of this study is to determine whether the number of Total Populations, Government Spending and Gross Regional Domestic Product affect Local Revenue in districts/cities in Riau Province. Panel data is a combination of time series data (time series) and data cross (cross section). There are several advantages of using panel data in economic research.

The data used in this panel data is a combination of cross section data and time series. Time series data used are annual data for 5 years from 2010 to 2014, and the cross section consists of 12 districts/cities in Riau Province which consists of Kuantan Singingi, Indragiri Hulu, Indragiri Hilir, Pelalawan, Siak, Kampar, Rokan Hulu, Rokan Hilir, Meranti Islands, Pekanbaru, Dumai.

In the regression model estimation method using panel data can be performed through three approaches:

a. Common Effect Models

Panel data model approach is the simplest because only combines the data time series and cross section. In this model neglected dimension of time as well as individuals, so it is assumed that the behavior of corporate data together in different periods. This method can use the approach Ordinary Least Square (OLS) or a least squares technique for estimating panel data model.

b. Fixed Effect Models

This model estimates that the differences between individuals can be accommodated on the difference intercept. To estimate the Fixed Effects panel data models using the technique of dummy variables to capture the difference between the company's intercept, the intercept differences can occur due to differences in the work culture, managerial, and incentives. Nevertheless, it slopes equally between the companies. The estimation model is often called the Least Squares Dummy Variable technique (LSDV).

c. Random Effect Models

This model will estimate the panel data where possible disturbance variables are interconnected across time and between individuals. In the Random Effects Model intercept differences are accommodated by the error terms of each company. The advantages of using a model are remove heteroscedasticity of Random Effect. This model is also called the Random Error Component Model (ECM) or technique Generalized Least Square (GLS).

6. **Selection of Model**

   a. Chow Test

   Chow test is a test to determine the model Fixed Effect or Random Effect most appropriately used in estimating panel data. When the value of F-Statistic is greater (>) then F table, means H0 is rejected. So, the most appropriate model used is Fixed Effect Model.

   b. Hausman Test

   Hausman test can be defined as statistical tests to select whether the model Fixed Effect or Random Effect most appropriately used. Hausman test statistic follows the *Chi Square* statistic distribution with a *degree of freedom* as much as k, where k is the number of independent variables. If the value of the Hausman statistic is greater than the critical value, H0 is rejected and the right model is a model Fixed Effect

   Classsic Assumption Test

   a. Multicollinearity Test

   Multicollinearity can be defined as a situation where one or more independent variables collinear expressed as a combination of other variables. This test aims to determine whether the regression found a correlation between the independent variables. If there is a correlation, then it called the problem of multicollinearity.

   b. Heteroscedasticity Test

   A regression model is said to be exposed in the event of inequality heteroscedasticity residual variance from one observation to another observation. If the variance of the residuals and the observations of the other observations remained, then it called homoscedasticity. If the variance is different, it is called heteroscedasticity.

7. **Statistical Analysis Regression Test**

    a. Coefficient of Determinant Test (R-Square)

    In essence, the coefficient of determination R^2 measures how far the ability of the model is to explain variations in the independent variables to measure the goodness of a model (goodness of fit).

    b. F-Statistic Test

    F-statistic test is done to see how much influence the independent variable as a whole or together on the dependent variable.

    c. T-Statistic Test (Partial Test)

    The t-test was conducted to see the significance of individual independent variables on the dependent variable to consider other independent variables are constant.

ANALYSIS RESULT

1. **Best Analysis Model**

    The chosen model form the best analysis test can be seen in the table below:

Tabel 1.1
**Estimation Results of Independent Variables towards Local Revenue
in Districts/Cities in Riau Province**

Dependent Variable: Local Revenue	Models		
	Fixed Effect	**Random Effect**	**Common Effect**
Constant	-9.341005	9.169051	10.52990
Std. Error	4.191211	1.120828	0.970080
T-Statistic	-2.228713	8.180605	10.85467
Probability	0.0309	0.0000	0.0000
Total Population	-0.601143	-0.310091	-0.237861
Std. Error	0.384706	0.108310	0.094218
T-Statistic	-1.562605	-2.863010	-2.524568
Probability	0.1252	0.0059	0.0144
Gov. Spending	1.824001	0.509185	0.717566
Std. Error	0.315956	0.101537	0.100600
T-Statistic	5.772952	5.014762	7.131849
Probability	0.0000	0.0000	0.0000

GRDP	0.387503	0.405490	0.083274
Std. Error	0.053798	0.039985	0.059433
T-Statistic	7.202888	10.14108	1.401141
Probability	0.0000	0.0000	0.1667
R^2	0.965932	0.707995	0.756498
F-Statistic	91.13615	45.25916	57.99240
Prob (F-Stat)	0.000000	0.000000	0.000000
Durbin-Watson Stat	1.582948	0.669860	0.554047

Source: All Results Processed with Eviews8.0

From the results of tests performed on both the analysis, with Chow Test or Likelihood Test and Hausman Test, the best model used is Fixed Effect Model. The selection of using Fixed Effect Model is based on the significance of the variables instead of using two other models (Random Effect Model and Common Effect Model).

2. Estimation Result of Data Panel Model

After selecting model that used in the test statistic and the election of Fixed Effect Model as the model used in this study (panel data model approach that combines cross-section and time series). In this model, the dimensions of time and individuals data in the districts/cities, assumed to be the same in every period. So here is the estimation of data with the number of observations by 12 districts/cities in Riau Province in 2010-2014.

Tabel 1.2
Fixed Effect Model

Variables	Coefficient	Std.Error	t-Statistic	Prob.
C	-9.341005	4.191211	-2.228713	0.0309
Total Pop.	-0.601143	0.384706	-1.562605	0.1252
Gov. Spending	1.824001	0.315956	5.772952	0.0000
GRDP	0.387503	0.053798	7.202888	0.0000
R^2	0.965932	**Prob(F-statistic)**		0.000000
F-statistic	91.13615	**Durbin-Watson Stat**		1.582948

Source: Processed with Eviews8.0

With this result estimation of Fixed Effect Model, we conclude the factors that affect to Local Revenue (PAD) for districts/cities in Riau Province in 2010-2014 are with following equation:

Local Revenue (PAD) = -9.341005 + (-0.601143Total_Population) + 1.824001Government_Spending + 0.387503GDRP

3. **Statistic Test**

   a. Coefficient of Determination Test (R-Square)

   The test results of using Fixed Effect Model, the value of R-Square is 0.965932 means that 96.5932% of independent variables (Total Population, Government Spending and GRDP) affect to Local Revenue of districts/cities in Riau Province, while the remaining 3.4068% are influenced by other independent variables, outside this research.

   b. F-Statistic Test

   F-statistic test is done to see how much influence the independent variables as a whole or together on the dependent variable.

   The test results from Fixed Effect Model, explain the value of F-statistic in 0.000000 with $\alpha = 5\%$, so it can be concluded that the independent variables (Total Population, Government Spending and GRDP) was influenced the dependent variable (Local Revenue) significantly, because $0.000000 < 0.005$ which means, H0 is rejected and H1 is accepted.

c. T-Statistic Test

The t-test was conducted to see the significance of individual independent variables on the dependent variable to consider other independent variables are constant.

To determine whether independent variables (Total Population, Government Spending and GRDP), has an influence on Local Revenue, we can conclude rom the table below:

Tabel 1.3
T-Statistic Test

Variables	Coefficient	t-Statistic	Prob.
C	-9.341005	-2.228713**	0.0309
Total Population	-0.601143	-1.562605	0.1252
Government Spending	1.824001	5.772952***	0.0000
GRDP	0.387503	7.202888***	0.0000

Source: Processed with Eviews8.0
  Note: *** denotes significant at $\alpha = 1\%$, ** denotes significant at $\alpha = 5\%$,
  * = denotes significant at $\alpha = 10\%$.

Based on the regression results with Fixed Effect Model the probability value of Total Population is $0.1252 > 0.05$, then H_0 is accepted and H_1 rejected, it means Total Population has no significant influence to Local Revenue.

Based on the regression results with Fixed Effect Model, the probability value of Government Spending is $0.0000 < 0.05$, then, H_0 is rejected and H_1 is accepted, it means Government Spending has significant influence to Local Revenue.

Based on the regression results with Fixed Effect Model, the probability value of Gross Regional Domestic Product is $0.0000 < 0.05$, then H_0 is rejected and H_1 is accepted, it means Government Spending has significant influence to Local Revenue.

DISCUSSION

1. The influence of Total Population towards Local Revenue

From the results above, Total Population has no impact to Local Revenue for districts/cities in Riau Province. Total Population has a negative coefficient, it means, Total Population not correlate positively to Local Revenue. The coefficient value of Total Population is -0.601143, which if there is an increase of 1% while other variables are constant, the changes are in the dependent variable (Local Revenue) which is a decreasing of 0.601143%. So, we see that the negative value from Total Population has no correlation to Local Revenue, it means, when the variable in the right side (Dependent Variable) is increase/decrease, then the variable in the left side will follow the opposite direction such increase/decrease. And Total Population in this research is not affect to Local Revenue for districts/cities in Riau Province.

In comparison with previous studies conducted by Kusrini (2015) on title "Analisis Pengaruh Belanja Langsung, Produk Domestik Regional Bruto dan Jumlah Penduduk Terhadap Pendapatan Asli Daerah" using panel data regression model with four variables which consists of Local Revenue (dependent variable) and Direct Expenditure, Gross Regional Domestic Product and Population (independent variable). In this study also determined that the variable Population does not significantly affect to Local Revenue.

With the results of this study, explains that there is no significant correlation between Total Population and Local Revenue. From this, in the period ahead, the local government in collaboration with the central government for binding quality of the population in Riau Province, especially in the introduction and implementation of business economics, especially for people who do not get the job. Coupled with the

reduction of the migrants who are mostly become a farmer. Due to the improved quality of the population in conducting business economy will affect the outcome of the productivity of the population itself.

Therefore, indirectly, the first hypothesis which assumes that Total Population has positive and significant impact to Local Revenue, can already be answered and demonstrated in this chapter, which is the absence of positive and significance impact of Total Population to Local Revenue.

2. **The influence of Government Spending towards Local Revenue**

In the above results, Government Spending showed a significant and positive sign on Local Revenue in districts/cities in Riau Province. Government Spending has a positive coefficient, which mean, Government Spending has a positive correlation towards Local Revenue. It has coefficient 1.824001, which if there is an increase of 1% while other variables are constant the changes are in the dependent variable (Local Revenue) which is an increasing of 1.824001%. With the correlation between Government Spending and Local Revenue, means when independent variables are increasing or decreasing, then dependent variable is following to the same direction, increasing or decreasing.

Comparing to previous research which conducted Indra Rindu Datu K (2012) concluded that the increase experienced in Government Spending has positive effects on Local Revenue due to the increase in Government Spending has a multiplier effect on the increase in Local Revenue from local taxes and levies through the construction of schools, health facilities and infrastructure, so that the increase in Government Spending will be a positive impact to Local Revenue. Therefore, if the government wants to increase in Local Revenue, the government is required to use Government

Spending as well as possible in order to improve the facilities and services for the communities. So it is easy for people to pay taxes and levies to local authorities (Local Government).

So that the results of this second analysis, which considered that the existence of positive and significant influence of the Government Spending on Local Revenue can be answered and proved in this section with their positive and significant effect of Government Spending on Local Revenue.

3. **The influence of Gross Regional Domestic Product towards Local Revenue**

From the results above, the Gross Regional Domestic Product (GRDP) showed a positive and statistically significant for all districts/cities in Riau Province. The GRDP has a positive coefficient and significant correlation between GRDP and Local Revenue. The Coefficient of GRDP is 0.387503, which if there is an increase in the value of GRDP on 1% while other variables are constant, then the changes in dependent variable (Local Revenue) was increased on 0.387503%. The positive correlation that occurred between GRDP and Local Revenue, explained when independent variables are increasing/decreasing, then variable dependent is following to the same direction, increasing or decreasing.

If we see from previous research, that conducted by Indra Rindu Datu K (2012), which use GRDP as independent variable, has positively effect and significant correlation between GRDP and Local Revenue in Makassar.

So based on the analysis above, the assumption for the third hypothesis, it is assumed that there is a significant and positive impact from Gross Regional Domestic Product towards Local Revenue.

CONCLUSION AND SUGGESTION

A. Conclusions

Based on analysis results and discussion, it can be drawn several conclusions from this study are:

1. Total Population

   From the above results using the Fixed Effect Model, revealed that the Total Population does not affect the Local Revenue. These results are not consistent with the hypothesis put forward in the study. Due to the quality and productivity is less than the people of Riau, as well as its high level of consumption of Riau.

   With assumption, the lack of quality of the population due to the quality of education is still far compared with education in Java. And most people work as farmers. And in this study, a population with a probability value on -0.601143 not effect to Local Revenue in the districts/cities in Riau Province on period 2010-2014.

2. Government Spending

   In this study, Government Spending with a probability value on 1.824001 is positive and significant impact to Local Revenue in the districts/cities in Riau Province on period 2010-2014. These results are consistent with the hypothesis proposed in this study.

   With assumption, that local government has taken the right decision in developing the potential of the region and promoting the development of facilities and infrastructures which required by people in carrying out the daily activities.

3. Gross Regional Domestic Product (GRDP)

   In this study, GRDP variable with a probability value on 0.387503 also have a positive influence and significant impact to Local Revenue in the districts/cities in

Riau Province on period 2010-2014. These results are also consistent with the hypothesis proposed in this study.

With assumption, that the distribution of taxes and levies is a big potential. Especially taxes derived from the processing industry and forestry. As well as natural factors that cannot be predicted or could not be included in economic assumption.

B. Suggestions

After interpreting on this study with some conclusions, the author give some suggestions relating to this research that can be used as input and consideration for the parties concerned and further research.

1. Barriers are derived from the low quality of the people and his lack of education on the importance of entrepreneurship. So in this study are expected that Local governments must take a lead in the introduction and education about the economic business for community with the support of infrastructure and facilities required, and provide assistance to Small and medium Enterprise (UKM) in the development and improvement of productivity. So, the people are more interested in being seller than buyer.

2. The government should be able to balance the needs of the government priority that will be implemented by way of the realization of the construction on infrastructure and facilities that can benefit the public. As well as the transparency related of Government Spending from the government to avoid misunderstandings between government and public.

3. In a way, the government has to analyze the various sectors that should be in particular concern. So that, government can implement policies in these

sectors, with the intention of these sectors can give more influence to increase

Local Revenue in subsequent years. Beside to increase the value of GRDP,

Government has to provide the society with any facilities and infrastructures

in accordance with their needs in improving the regional potential. Especially

from areas that dominated in primary sector, which there are so many investor

for that sector, with an agreement for appropriate and fair sharing between

local communities and investors.

REFERENCES

Aryanti, Eni and Indarti, Iin, tt, "Pengaruh Variabel Makro Terhadap Pendapatan Asli Daerah Periode 2000-2009 di Kota Semarang", *Jurnal Ilmiah.*

Atmaja, Arief Eka, 2011, "Analisis Faktor-Faktor Yang Mempengaruhi Pendapatan Asli Daerah (PAD) Di Kota Semarang", *Skripsi,* September.

Awanis, Adilla, 2015, "Analisis Faktor-Faktor Yang Mempengaruhi Penyerapan Tenaga Kerja Pada Industri Kecil Di Daerah Istimewa Yogyakarta Tahun 2009-2014", *Skripsi.*

Basuki, Agus Tri., and Yuliadi, Imamudin., 2015, *EKONOMETRIKA, Teori dan Aplikasi,* Mitra Pustaka Nurani (MATAN), Yogyakarta.

Budianas, Nanang, 2013, "Referensi Dan Gudangnya Ilmu Ekonomi", *(http://nanangbudianas.blogspot.com/2013/02/sumber-sumber-pendapatan-asli-daerah.html, accessed 3rd Feb 2013).*

Datu K, Indra. R., 2012, "Analisis Faktor Yang Mempengaruhi Pendapatan Asli Daerah (PAD) Di Makassar Tahun 1999-2009", *Skripsi.*

Dewi, Sheila Ratna, 2013, "Peranan Retribusi Parkir Dalam Meningkatkan Pendapatan Asli Daerah Kota Magelang", *Skripsi,* Januari.

Frediyanto, Yanuar, 2010, "Analisis Kemampuan Keuangan Kabupaten/Kota Di Provinsi Jawa Tengah Sebelum dan Sesudah Kebijakan Otonomi Daerah", *Skripsi,* Juli.

Gujarati, Damodar N., and Porter, Dawn C., 2012, *Dasar-Dasar Ekonometrika.* 5th Edition, Salemba Empat, South Jakarta.

Helti, Kristiana. A., 2010, "Analisis Faktor-Faktor Yang Mempengaruhi Pajak Daerah Serta Tingkat Efisiensi Dan Aktivitas Dalam Pemungutan (Studi Kasus di Kabupaten Karanganyar)", *Skripsi,* Mei.

Kusumastuti, Idhayu, 2002, "Peran Pendapatan Asli Daerah Sendiri Dalam Pembiayaan Pembangunan Tahun 1989/1990-1998/1999", *Skripsi,* April.

Kusrini, Diyah, 2015, "Analisis Pengaruh Belanja Langsung, Produk Domestik Regional Bruto dan Jumlah Penduduk Terhadap Pendapatan Asli Daerah (Studi Kasus Sekabupaten/Kota di Provinsi Sumatera Selatan tahun 2010-2014), *Skripsi.*

Mawitjere, P. R., 2013, "Pendapatan Asli Daerah (PAD)", *College Journal.*

Munawir, S. 1992. "Pokok-Pokok Perpajakan". Yogyakarta: Liberty.

Mutaqin, Achmad S., dkk, 2012/2013, "Analisis Regresi Ukuran Penilaian Kemampuan/Kesesuaian: R-Square (R2)", *Jurnal Ilmiah.*

Paledung, F. R., 2013, "Memahami Pelaksanaan Desentralisasi Fiskal dan Pendapatan Asli (Studi Fenomenologi pada Kabupaten Poso)-Genap 2012/2013. Makassar".

Prakarsa, Febrian Dwi., 2014, "Analisis Pengaruh Pendapatan Asli Daerah Dan Pengeluaran Pemerintah Daerah Terhadap Pertumbuhan Ekonomi (Studi Kasus Di Kabupaten Kota Jawa Timur Tahun 2008-2012)", *Jurnal Ilmiah,* Agustus.

Rahmawati, Nur Indah, 2010, "Pengaruh Pendapatan Asli Daerah (PAD) dan Dana Alokasi Umum (DAU) Terhadap Alokasi Belanja Daerah (Studi Pada Pemerintah Kabupaten/Kota Di Jawa Tengah)", *Skripsi,* Mei.

Setiawan, and Kusrini, Dwi Endah., 2010, *Ekonometrika,* ANDI Offset, Yogyakarta.

Tobing, Pahala. B.L., 2015, "Analisis Pengaruh Jumlah Pekerja, Pengeluaran Pemerintah, dan Produk Domestik Regional Bruto Terhadap Pendapatan Asli Daerah Tahun 1999-2013 (Studi Pada Malang Raya)", *Jurnal Ilmiah.*

Widarjono, Agus., 2013, *Ekonometrika, Pengantar dan Aplikasinya, disertai panduan Eviews*, UPM STIM YKPN, Yogyakarta.

http://abstraksiekonomi.blogspot.co.id/2013/11/teori-pengeluaran pemerintah.html, accessed Nov 2013.

http://repository.usu.ac.id/bitstream/123456789/26961/4/Chapter%20II.pdf

http://riau.bps.go.id/websiteV2/pdf_publikasi/Statistik-Daerah-2015.pdf

Riau Dalam Angka, 2010, BPS, Riau.

Riau Dalam Angka, 2011, BPS, Riau.

Riau Dalam Angka, 2012, BPS, Riau.

Riau Dalam Angka, 2013, BPS, Riau.

Riau Dalam Angka, 2014, BPS, Riau.