Factors Affecting Regional Financial Independence in the Special Region of Yogyakarta

Fika Rahmadani

Development Economic Study Program, Economics Faculty, Universitas Negeri Semarang

Permalink/DOI: https://doi.org/10.15294/efficient.v5i1.50786

Received: July 2021 ; Accepted: October 2021 ; Published: January 2022

Abstract
This study aims to determine the factors that influence the financial independence of the Regency/City of the Special Region of Yogyakarta in 2010-2019. The variables used are GRDP, capital expenditure, population, and taxes. The method used is panel data using Eviews 9.0 software. The data used in this study is panel data consisting of time series data from 2010-2019 and cross data of 5 districts/cities. The results of this study indicate that GRDP has no effect on regional financial independence, capital expenditures have a significant positive effect on regional financial independence, population has a significant positive effect on regional financial independence, and taxes have a significant positive effect on regional financial independence.

Keywords: Regional Financial Independence, Capital Expenditure, Population, Tax
INTRODUCTION

Fiscal decentralization has been implemented since 2001 in accordance with Law no. 22 of 1999 which was later updated with Law no. 32 of 2004 concerning Regional Government and Law no. 33 of 2004 concerning Central and Regional Financial Balance which provides opportunities for regions to explore and manage the potential that exists in their own regions in order to realize regional financial independence. The main objectives in implementing fiscal decentralization include eliminating the gap between the central government and regional governments as well as the gaps that occur between regions (Suyanto, 2015).

Halim (2004) states that regional financial independence is the ability of the government to finance its own government activities, development, and services to people who have paid taxes and levies as a source of regional income. Regional financial independence is reflected in the receipt of local revenue which is one of the main indicators and benchmarks for achieving development in the implementation of regional autonomy. The way to calculate the ratio of regional financial independence is through a comparison between local revenue and total income (Halim, 2002).

Hersey and Blanard in Halim (2004) classify the level of regional financial independence as in table 1. The table shows the level of regional financial independence which shows the level of regional financial ability. The higher the level of regional financial independence, the higher the level of regional financial capacity, and vice versa. Java Island is an island that has the highest average regional financial independence compared to other islands, which is 62%. This average is included in the medium category because it is above 50%. Meanwhile, on other islands, it is still included in the low category because it is still below 50%.

The average regional financial independence of each province on the island of Java in 2010-2019 includes DKI Jakarta Province at 68%, West Java at 64%, Central Java at 62%, Yogyakarta Special Region at 45%, followed by Java East by 66%, and Banten by 66%.

Table 1. Level of Regional Financial Independence

<table>
<thead>
<tr>
<th>Independence (%)</th>
<th>Financial Independence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% - 25%</td>
<td>Very Low</td>
</tr>
<tr>
<td>25% - 50%</td>
<td>Low</td>
</tr>
<tr>
<td>50% - 75%</td>
<td>Medium</td>
</tr>
<tr>
<td>75% - 100%</td>
<td>High</td>
</tr>
</tbody>
</table>

Source: Keputusan Menteri Dalam Negeri No. 690.900.327 Year 1996

The Province of the Special Region of Yogyakarta in 2010-2019 had an average regional financial independence below the average regional financial independence of Java Island and occupied the lowest level compared to other provinces on the island of Java. The average regional financial independence of the Special Region of Yogyakarta is included in the low category because it is still below 50%, which is 45%, and the figure tends to decrease every year.

In 2010 and 2011 the Province of the Special Region of Yogyakarta was able to achieve a level of regional financial independence above 50%, but in the following years, it tends to decrease. In 2012 it decreased by 12%. Then in 2013, it increased by 1% and the figure remained until 2015. In 2016 and 2017 it decreased again, respectively, by 4% and 7%. Then followed by
2018 and 2019 which experienced a slight increase of 1%.

**Figure 1.** Ratio of Provincial Financial Independence in Java Island 2010-2019  
Source: DJPK, 2021 (processed)

Figure 2. shows that the regional financial independence of the Regency/City of the Special Region of Yogyakarta has an average of below 50% and there are even districts that have an average of below 25%. This indicates that the level of financial independence of the Regency/City of the Special Region of Yogyakarta is in two categories, namely the low and very low categories.

Bantul, Kulon Progo, and Gunung Kidul regencies have a regional financial independence ratio of less than 25% which is included in the very low category, while Sleman Regency and Yogyakarta City have a regional financial independence ratio between 25%-50% which is included in the low category. Therefore, it can be said that the region has not been able to realize regional financial independence.

Suhanda (2017) states that the level of regional financial independence shows the level of regional dependence on external funding sources. The higher the regional dependence on financial assistance from external parties, the lower the level of regional financial independence, and vice versa. So the Regency/City of the Special Region of Yogyakarta can be said to be still very dependent on external funding sources because it has not been able to increase regional financial independence.

**Figure 2.** Ratio of Regional Financial Independence of the Regency/City of the Province of the Special Region of Yogyakarta in 2010-2019  
Source: DJPK, 2021 (processed)

GRDP is the total value of goods and services produced in an area within a certain period of time (one year). Saragih (2003) states that the large portion of the contribution of local communities to GRDP can be used to measure the level of success of regional autonomy. The greater the GRDP of a region, the higher the regional revenue so that the potential for successful implementation of regional autonomy is greater. In line with the Classical Economic Theory proposed by Adam Smith, the economic growth of a country is influenced by population growth and total output.
Figure 3. shows that the GRDP in the Regency/City of the Special Region of Yogyakarta varies. There are districts/cities that have high GRDP and some have quite low GRDP. This is because the potential possessed by the regions is different and the ability of the regions to manage regional wealth is also different between regencies/cities. This results in different and very varied GRDP receipts between districts/cities.

Sleman Regency has the highest average GRDP, which is IDR 27,739,607,970,000. Meanwhile, Kulon Progo Regency has the lowest average GRDP, which is IDR 6,383,847,554,000. Although it varies between districts/cities, in 2010-2019 there is always an increase. This indicates that each Regency/City of the Special Region of Yogyakarta has been able to increase its regional income, although it varies widely between regencies/cities.

According to Permendagri No. 13 of 2006 Article 53 "capital expenditures are used for expenditures made in the context of purchasing/procuring or developing tangible fixed assets that have a useful value of more than 12 months to be used in government activities, such as in the form of land, equipment and machinery, warehouses and buildings, roads, irrigation and networks, and other fixed assets". The capital expenditure budget has a target to improve the welfare of the community through financing development in the field of facilities and infrastructure that can support the smooth running of a business and the fulfillment of public services.

According to Wagner, the increase in government spending will increase welfare, banking, development, defense, security, and order. Figure 4 shows that the capital expenditure of the Regency/City of the Special Region of Yogyakarta tends to increase during 2010-2019. In this way, it can be said that public facilities and infrastructure in each of these regions will improve from year to year if the allocation of capital expenditures is right on target. Although it tends to increase, the capital expenditure of each district/city varies. Sleman Regency has the highest average government expenditure budget in the form of capital expenditure in the Province of the Special Region of Yogyakarta, which is IDR 283,243,780,891.

In 2019 Gunung Kidul Regency had the highest capital expenditure compared to other regencies/cities, which amounted to IDR 493,784,689,398. Meanwhile, in 2019 the City of Yogyakarta had the lowest capital expenditure of IDR 327,434,327,199. The amount of capital expenditure in Gunung Kidul Regency experienced a fairly high increase compared to the previous year and was the highest in 2019 compared to other regencies/cities because Gunung Kidul Regency wants to optimize the
development of the tourism industry and improve the quality of human resources to realize regional independence.

Figure 4. Capital Expenditures of the Regency/City of the Province of the Special Region of Yogyakarta in 2010-2019
Source: DJPK, 2021 (processed)

In development planning, the population is an important factor, because the population is a human resource whose participation is very much needed. In the book Todaro (2000) states that population growth is not a problem. Population growth does not always have a negative impact, basically an increase in population can have a positive and beneficial effect on economic development.

The increase in population results in an increase in the number of requests for consumer goods so as to encourage the level of production of these goods, thereby lowering production costs and making them more profitable. Therefore, the output produced increases, so that regional financial independence will be higher. Adam Smith stated that an increase in population has a positive impact on local revenue.

Based on Figure 5, the population of the Regency/City of the Special Region of Yogyakarta has always increased in 2010-2019, but the population of each district/city varies. The population of Sleman Regency compared to Yogyakarta City has a wide range. Sleman Regency occupies the highest level of the population with an average population of 1,161,272 people, while the City of Yogyakarta occupies the lowest level of the population with an average population of 410,044 people because the area of Sleman Regency is larger than Yogyakarta City.

Sleman Regency from 2010-2019 has the fastest population growth rate compared to other regencies/cities. This is because the city of Yogyakarta as the capital city of the Special Region of Yogyakarta has become a densely populated area. Therefore, the development and increase in population have shifted to its supporting district/city, namely Sleman Regency.

Figure 5. Total Population of Regency/City of Yogyakarta Special Region Province 2010-2019
Source: BPS, 2021 (processed)
In implementing regional autonomy, regional government, and regional development, a very important factor in supporting its implementation is local taxes. The role of regional taxes is as a source of income for the region, so the potential that exists in the region must be explored as much as possible and managed as well as possible in accordance with applicable laws and regulations.

![Figure 6. Regency/Municipal Taxes of the Province of the Special Region of Yogyakarta in 2010-2019](source)

Source: DJPK, 2021 (processed)

Based on Figure 6, regional tax revenues for the Regency/City of the Special Region of Yogyakarta tend to increase in 2010-2019, but the amount of revenue for each district/city is very varied. The population of Sleman Regency compared to Gunung Kidul Regency and Kulon Progo Regency has a fairly wide range. Sleman Regency has the highest level of local tax revenue with an average tax revenue of IDR 355,771,884,882, while Gunung Kidul Regency and Kulon Progo Regency have the lowest level of regional tax revenue with an average tax revenue of IDR 29,230,611,297 and IDR 27,662,899,302.

**RESEARCH METHODS**

The type of data used in this study is secondary data, namely data obtained indirectly from the web or documents, whether published or unpublished. This research uses quantitative research. The type of data used is panel data, which is a combination of cross-sectional data consisting of 5 regencies/cities in the Province of the Special Region of Yogyakarta and time-series data, which is annual data, starting from 2010 to 2019.

The variables in this study used one dependent variable and four independent variables. The dependent variable in this study is Regional Financial Independence (KKD) in percent, while the independent variable in this study is GRDP (X1) expressed in IDR, capital expenditure (X2) expressed in IDR, population (X3) expressed in souls, and taxes (X4) is expressed in IDR. This study uses panel data analysis and for data management using E-views.

This analysis uses regression because the supporting data are in the form of numbers and the results sought are the influence of the independent variable on the dependent variable. Panel data in this study is used to determine the effect of the variables GRDP, capital expenditure, population, and taxes on regional financial independence in the Regency/City of the Special Region of Yogyakarta. The general model will be used to determine regional financial independence in the Province of the Special Region of Yogyakarta in 2010-2019.

This research has three approaches, namely Common Effect, Fixed Effect, and Random Effect. Determination of the best approach model is carried out at the stage of selecting the estimation method using the Chow
test and Hausman test. After the best model has been found, the next step is to perform statistical tests to analyze the suitability of the regression model obtained.

The statistical test consists of the coefficient of determination or R-squared, f-test, and t-test. Next is the classical assumption test in order to produce an estimated parameter value that matches the actual value so that the parameter value has the characteristics of being unbiased, consistent, and also efficient or BLUE (best, linear, unbiased estimator). Classical assumption test consists of normality test, multicollinearity test, and heteroscedasticity test. Equation 1 is the econometric model.

\[ KKD_{it} = \beta_0 + \beta_1 PDRB_{it} + \beta_2 BM_{it} + \beta_3 Pop_{it} + \beta_4 T_{xit} \mu_{it} \] 

Equation 1

Information:
- \( KKD_{it} \) = Percentage of Regional Financial Independence
- \( PDRB_{it} \) = Gross Regional Domestic Product
- \( BM_{it} \) = Capital Expenditure
- \( Pop_{it} \) = Total Population
- \( T_{xit} \) = Tax
- \( \mu_{it} \) = Component Error at Time t for Unit Cross Section
- \( i \) = Data Cross Section 5 Regencies/Cities in DIY Province
- \( t \) = Data Time Series 2010-2019

**RESULTS AND DISCUSSION**

This study uses three-panel data estimation models, namely the common effect model, the fixed-effect model, and the random effect model. This study analyzes the effect of GRDP, capital expenditures, population, and taxes on regional financial independence in 5 Regencies/Cities of the Special Region of Yogyakarta. The results of the three panel data estimation models can be seen in Table 2.

**Table 2. Panel Data Estimation Results**

<table>
<thead>
<tr>
<th>No</th>
<th>Variabel</th>
<th>Model</th>
<th>Common</th>
<th>Fixed</th>
<th>Random</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Konstanta</td>
<td></td>
<td>8,980228</td>
<td>-30,84761</td>
<td>8,980228</td>
</tr>
<tr>
<td></td>
<td>(0,0000)</td>
<td>(0,1113)</td>
<td>(0,0000)</td>
<td>(0,0000)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>PDRB</td>
<td></td>
<td>1,08E-12</td>
<td>-6,44E-13</td>
<td>1,08E-12</td>
</tr>
<tr>
<td></td>
<td>(0,0000)</td>
<td>(0,3429)</td>
<td>(0,0000)</td>
<td>(0,0000)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Capital Expenditure</td>
<td></td>
<td>1,13E-11</td>
<td>1,53E-11</td>
<td>1,13E-11</td>
</tr>
<tr>
<td></td>
<td>(0,0221)</td>
<td>(0,0113)</td>
<td>(0,0013)</td>
<td>(0,0013)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Total Population</td>
<td></td>
<td>-1,59E-05</td>
<td>7,15E-05</td>
<td>-1,59E-05</td>
</tr>
<tr>
<td></td>
<td>(0,0000)</td>
<td>(0,0262)</td>
<td>(0,0000)</td>
<td>(0,0000)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Tax</td>
<td></td>
<td>1,00E-11</td>
<td>3,16E-11</td>
<td>1,00E-11</td>
</tr>
<tr>
<td></td>
<td>(0,2626)</td>
<td>(0,0177)</td>
<td>(0,1073)</td>
<td>(0,1073)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>R2</td>
<td></td>
<td>0,916414</td>
<td>0,963704</td>
<td>0,916414</td>
</tr>
<tr>
<td></td>
<td>(0,908984)</td>
<td>(0,956621)</td>
<td>(0,908984)</td>
<td>(0,908984)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Adj R2</td>
<td></td>
<td>0,916414</td>
<td>0,963704</td>
<td>0,916414</td>
</tr>
<tr>
<td></td>
<td>(0,908984)</td>
<td>(0,956621)</td>
<td>(0,908984)</td>
<td>(0,908984)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Std.Error</td>
<td></td>
<td>3,018879</td>
<td>2,084135</td>
<td>3,018879</td>
</tr>
<tr>
<td></td>
<td>(123,3424)</td>
<td>(136,0735)</td>
<td>(123,3424)</td>
<td>(123,3424)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Prob (F-Statistik)</td>
<td></td>
<td>0,000000</td>
<td>0,000000</td>
<td>0,000000</td>
</tr>
<tr>
<td></td>
<td>(123,3424)</td>
<td>(136,0735)</td>
<td>(123,3424)</td>
<td>(123,3424)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Durbin Watson-stat</td>
<td></td>
<td>0,701623</td>
<td>1,400917</td>
<td>0,701623</td>
</tr>
<tr>
<td></td>
<td>(0,701623)</td>
<td>(1,400917)</td>
<td>(0,701623)</td>
<td>(1,400917)</td>
<td></td>
</tr>
</tbody>
</table>

Significance \( \alpha = 5\% \)

Source: Output E-Views 9.0, 2021

There are several ways in selecting the model, namely in the first stage, conducting the Chow Test, which is choosing the best model between the common effect model and the fixed effect model. The second stage is to do the Hausman test, which is to choose the best model between the random fixed effect and the fixed effect model.

Table 3 shows the cross-section F value of 13.354361 with a probability of 0.0000 and significance to = 5\%, it can be decided that the
model chosen is the fixed effect model because the probability value is 0.0000 > 0.05. Table 4 shows that the random cross-section value is 54.47445 with a probability of 0.0000 and a significance of = 5%, so the best decision-making model is the fixed effect model because the probability value of random cross-section is 0.0000 < 0.05.

Table 3. Results of Estimated Likelihood Ratio-Chow Test

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section</td>
<td>13.354361</td>
<td>(4.41)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Chi-square</td>
<td>41.707689</td>
<td>4</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Significance α = 5%
Source: Output E-Views 9.0, 2021

Based on the model selection test that has been carried out, for decision-making the best model in estimating the effect of GRDP, capital expenditure, population, and taxes on regional financial independence uses a fixed effect model with the equation model that can be seen in equation 2.

\[
KK_{Di} = -30.84761 - 6.44 \cdot PDR_{Bi} + 1.53 \cdot BM_{Di} + 7.15 \cdot Pop_{Di} + 3.16 \cdot Tx_{Di} + \mu_{Di} \text{...........................................(2)}
\]

Based on the results of the statistical tests carried out, the results of the data regression output in table 2 show the R2 value in the fixed effect model of 0.963704 where the variation of the dependent variable, namely regional financial independence can be explained by variations in independent variables including GRDP, capital expenditure, population, and taxes together are 96%. While the remaining 4% is explained by other variables outside the variables studied.

Meanwhile, based on the t-test, it is done by comparing the value of t-count with t-table. Obtained from the value of t-table = (α = 0.05; df = 46) = 1.67866. If the value of t-statistics > t-table, it means that the independent variable partially has a significant effect on the dependent variable and vice versa. Table 5 is the result of the t-statistical calculation.

Table 4. Results of Correlated Random Effect-Hausman Test

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section Random</td>
<td>53.47445</td>
<td>4</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Significance α = 5%
Source: Output E-Views 9.0, 2021

The GRDP variable partially has an insignificant negative effect on regional financial independence. Based on the table 5 test results, it shows that the value of t-count < t-table (-0.959606 < 1.67866). Judging from the results of the variable coefficient of GRDP, which is -6.44, which means that the increase in GRDP has an insignificant negative effect on the level of regional financial independence with the assumption of ceteris paribus.

The capital expenditure variable partially has a significant positive effect on regional financial independence. Based on the test results, it shows that the value of t-count > t-table (2.653721 > 1.67866). Judging from the results of the variable coefficient of capital expenditure, which is 1.53, it means that if capital expenditure increases by one unit, regional financial independence will also increase by 1.53 percent with the assumption of ceteris paribus.
The population variable partially has a significant positive effect on regional financial independence. Based on the test results, it shows that the value of t-count > t-table (2.260322 > 1.67866). Judging from the results of the variable coefficient of the population that is equal to 7.15. This means that if the population increases by one unit, the regional financial independence will also increase by 7.15 percent with the assumption of ceteris paribus.

The tax variable partially has a significant positive effect on regional financial independence. Based on the test results, it shows that the value of t-count > t-table (2.472013 > 1.67866). Judging from the results of the local tax variable coefficient of 3.16. This means that if the regional tax increases by one unit, the regional financial independence will also increase by 3.16 percent with the assumption of ceteris paribus.

Meanwhile, the F-statistical test in this study was carried out by comparing the F-count value with the F-table. If F-count > F-table then Ho is rejected, meaning that the independent variables simultaneously affect the dependent variable. Based on the output results in table 2. obtained F count of 136.0735 using = 5%. The F table calculation is the degree of freedom for numerator (dfn) = 3 which is obtained from (k-1 = 4-1) and the degree of freedom for numerator (dfn) = 46 which is obtained from (nk = 50-4), then it is obtained F table of 2.81.

This means that F count > Ftable (136.0735 > 2.81) and the probability F statistic is 0.000000 significant at = 5%. This means that GRDP, capital expenditure, population, and taxes have a joint effect on regional financial independence in 5 regencies/cities in the Province of the Special Region of Yogyakarta in 2010-2019. GRDP has an insignificant negative effect on regional financial independence.

The results of this study are in line with Utami’s research (2018), namely, GRDP does not have a significant effect on the financial independence of districts/cities in South Kalimantan Province. This is because the increase in GRDP is not accompanied by efforts to minimize the level of dependence on the central government. The results of this study are not in line with the Classical Economic Growth theory proposed by Adam Smith where the economic growth of a country is influenced by population growth and total output growth.

Capital expenditure has a significant positive effect on regional financial independence. The results of this study are in line with research by Ernawati & Riharjo (2017), namely capital expenditure has a significant positive effect on regional financial independence. The higher the capital expenditure budget receipts in a region, the better and adequate facilities, and infrastructure can support regional economic activities so that the level of productivity increases and the output produced by the region will also increase, and can attract investors to invest in the region. The results of this study are in accordance with the theory put forward by Wagner which states that increasing government spending will increase welfare, banking, development, defense, security and order.

The population has a significant positive effect on regional financial independence. The results of this study are in line with the research of Asmuruf, et al (2015), namely the number of residents has a significant positive effect on regional original income, which means that every time there is an increase in the number of
residents, it will increase local revenue so that it will increase regional financial independence. The increase in the population indicates that the level of community productivity increases so that the output produced also increases.

Taxes have a significant positive effect on regional financial independence. The results of this study are in line with Lukitawati’s research (2020), namely taxes have a significant positive effect on regional financial independence. The higher the tax revenue in an area, the higher the level of local revenue, because taxes are the largest source of government revenue. Taxes are also a reflection of local revenue.

In carrying out regional development, regions are required to explore the potential of regional original income and maximize the potential for tax collection in order to improve regional welfare. The results of this study are also in accordance with the theory put forward by Adam Smith, in which an increase in population has a positive impact on local revenue.

CONCLUSION

The GRDP variable has an insignificant negative effect on regional financial independence. While other variables, namely capital expenditure, population, and taxes have a significant positive effect on regional financial independence.

REFERENCES


