SHORT RUN AND LONG RUN IMPACT OF GOVERNMENT REVENUE AND DEBT ON INFLATION IN INDONESIA

An’im Kafabih¹, Ghozali Maski², Arif Hoetoro³

¹ Faculty of Economics and Business, Diponegoro University
²,³ Faculty of Economics and Business, University of Brawijaya, Malang, Indonesia
Email: kafa@lecturer.undip.ac.id

Abstract

The objective of this paper is to examine the cause of inflation based on fiscal policy perspective. Fiscal policy here can be divided into two variables, viz government revenue and government debt where these two are inflationary process. Thus, if these two variables are not controlled properly, they will lead to a higher level of inflation. Using annual data from 1972 to 2016 taken from worldbank database which is processed by ARDL bounds test approach, the result of co integration shows that government revenue and debt are simultaneously have long run relationship. This result is supported with the long run and short run relation for each independent variable individually. In the short run, government revenue contributes to increasing level of inflation by 1.17% and government debt contributes 0.67%. In the long run, the effect of government revenue on inflation is 1.008% whereas government debt on inflation is 0.73%. This result implies that government revenue must be managed properly to control level of inflation because this variable has higher impact on inflation rather that government debt both in short run and also long run.

Keywords: Fiscal policy, government revenue, government debt, inflationary process.

1. INTRODUCTION

As Deaton (2015) argued that consumption of goods and services are a fundamental determinant of human welfare, it is important to keep the prices stable to help the ones afford to buy their necessaries. Then the macroeconomic variable that can depict the movement of that price in general is delineated in the level of inflation where Blanchard (2017) defined it as sustained rise in general level of price.

Based on that brief explanation, price stability that can affect to better human welfare through their better purchasing power is the zero level of inflation, as defined by some economist such as Blanchard (1997: 574), Hoover (2011:160), Kunio Okina in Nishizaki and Watanabe (2000), and so on. Aiyagari (1990) noted that there are three benefit that can be gained for a zero inflation policy, viz, reducing transaction cost, reducing the capital income tax, and reducing uncertainty.

Fisher effect explains as inflation increase by one per cent, nominal interest rate increase one per cent. Aiyagari (1990) explained that people naturally want to of currency and gain earning from interest rate as much as they can, therefore increasing interest rate because of inflation will be responded by decreasing their balance of currency and demand deposit because these ones cannot give them earning from interest rate. They will move their currency and demand deposit to some others asset that will give him much earning from increased interest rate. The process of that moving fund between account will emerge transaction cost, called shoe-leather costs, therefore by making inflation to zero, shoe-leather cost will be minimised.

Aiyagari (1990) also explains that in market economy, price change is a signal of supply and demand of goods and services. For instance, it in one district the price of some good is higher that others, it means that the goods is in scarcity, and decision to supply goods to that district will be appropriate decision. However, inflation ruins that system where people do not know on why the price is changing. People do not know whether inflation happen due to money change or real change in supply and demand. The
decision making become harder (Aiyagari, 1990). Sometimes output will change in response to change in the money supply, even though real demand and supply are not change. This will make misallocation in resources. Therefore, by making inflation to be zero, the uncertainty in decision making will be minimised.

These three benefit of zero inflation making controlling of inflation more momentous since Indonesia never gain zero level of inflation or even near-zero inflation as depicted in below line chart.

Graph. 1. Inflation in Indonesia

![Graph of Inflation in Indonesia](image)

Source : Bank of Indonesia, 2018 (Processed with MS Excel 2013).

The chart above depicts the fluctuation movement of inflation in Indonesia. It also delineates that Indonesia never gain stable price in the form of zero inflation or even near-zero inflation. The lowest inflation ever gained is 2.41% in November 2009, and there is no increasing level of inflation at the rate of 2% or even 1%, nor 0%. Moreover, at that observed period, the highest rise of inflation is 18.38% in November 2005.

Following Aiyagari (1990) that questioning on what cause of the price to change, this study try to answer that question based on fiscal policy perspective. In fiscal policy, at least there are two factors that affect level of inflation to rise if they are not controlled properly. The first is government revenue, and the second is government debt. In Indonesia these two variables is very important to support development, but also significant cause of inflation.

Government revenue is used to finance government expenditure which is usually planned in fiscal year, making level of development to rise. As Indonesia applied deficit budgeting, government debt also hold the other important role in financing expenditure of the government. Indonesian Forum for Budget Transparancy2 figured out that the process of national or state budgeting (in short, APBN) takes almost a year to discuss, plan, and adopt a budget at both in national level and in local level. In the case of state budgets, the process starts from national-level community consultations of development planning (musrembangnas) which is held in fiscal year.

There are a few empirical research that study the relation between government revenue that affects inflation. One study conducted by Baskaran (2012) argued that decentralised revenue lead to lower level of inflation. Other study argued that inflation targeting has significant effect to public revenue collection positively (Lucotte, 2010). In the relation between government debt and inflation, Moreno (2000) showed that fiscal deficit increases public debt, making fiscal deficit has positive relation on Inflation in the long run. Other study such as Kocner (2014)’s study said that level of external debt do not have a significant effect on inflation. Back to the year of 1988, Hafer and Hein (1988) showed that increase in federal debt do not cause higher rate of inflation.

Based on that previous empirical study, the main objective of this paper is to prove the inflationary process of government debt and government revenue as part of fiscal policy instrument on inflation in the case of Indonesia. Indonesia is emerging country that is still developing its country, however the development process through these fiscal instrument is an inflationary prosess, meaning that not-controlled these fiscal instrument (in this study is government revenue and debt) will lead to higher level of inflation.

In addition, Indonesia adopt a wide range of social reform after the fall of President Soeharto (Nasution, 2016). One of the reform is a “big-bang” approach by giving greater political power and budgets to local governments (Nasution, 2016). However, regional government have very limited own fiscal resource, making regional government depend overwhelmingly (90%) on transfer from the national government (Blondal, Hawkesworth, and Choi, 2009). Therefore, this study become important as all fiscal policy especially focuss on

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2 See [http://seknasfitra.org/analisis/tentang-anggaran/?lang=en](http://seknasfitra.org/analisis/tentang-anggaran/?lang=en)
government revenue and debt will significantly affect to the local government.

2. THEORETICAL FOUNDATION

Inflation

Inflation is a general and ongoing rise in the level of price in an entire economy (Openstax, 2014), but not refer to relative price since relative price is the price of goods relative to other goods (Mankiw, 2012). In historical aspect, the early history about inflation measurement according to O’Neill, Ralph and Smith (2017) can be tracked in the 1700-1879 because from 1880 onward, official organisations had formalised and managed data collection. The conclusion of that data then were used for political decision making which same as practice in modern era (O’Neill, Ralph and Smith, 2017).

Inflation can be measured based on Consumer Price Index (CPI) and/or GDP deflator. CPI measures the retail price of a “fixed market basket” of several thousand goods and services purchased by household (Froyen, 2013). Deflator GDP or implicit price deflator for GDP is the ratio of nominal GDP to real GDP, a measurement of overall level of price that shows the cost of the currency produced basket of goods relative to the cost of that basket in a base year (Mankiw, 2012).

Basically, aggregate demand tries to conceptualise monetary and fiscal policy that will affect to both output, and general price. Some instruments that included to monetary policy is money supply, and for fiscal policy is government expenditure and taxation with the assumption of closed economy. Furthermore, as the aggregate demand shift outward, this will lead to increasing output in the short run, and followed by the rise of general price in the long run.

Government revenue to Inflation

Naghshpour (2014) defines fiscal policy as the government intervention in the economy through manipulation of government revenue and disbursements for the purpose of influencing the course of the economy. Government collects revenue from taxes, fees and charges, royalties on natural resources, and the sale of goods and services (Ruggeri in Shah, 2005: 35). In popular discussions, taxes are usually viewed as the only source of government revenue and also a dominant form of government finance (Rosen, 2005:15; Hyman, 2011: 429). That resources government obtained then are used to provide citizens with goods and services such as roads, police, fire protection, and national defense (Hyman, 2011).

The rise of tax revenue will increase the government expenditure. Based on aggregate demand point of view, increased government expenditure upward, shifting the IS curve to the right. The effect then will increase the aggregate demand (AD) where AD curve shift to the right. This condition will affect aggregate price to rise in the long run. However, Siddiqi (1996) argued that if a country applied public expenditure within the bounds set by available money, this condition will lead to decreased level of inflation. By defining “public expenditure within the bounds set by available means “ as the balanced budgeting, the role of taxation as the main source of government revenue is very important. The consequences of balance budgeting, country should use its own revenue from tax to finance its expenditure.

Government debt to Inflation

At the beginning, to understand the relation between government debt for financing expenditure to inflation, Richardian equivalent should be explained firstly. According to Mankiw (2012: 554-556), Richardian equivalent is the forward-looking consumers and/or bondholders to respond current tax cut on his/her spending. When Government cut the tax, lead to fiscal deficit (because of low government’s revenue gained from tax), the deficit will be financed by issuing bonds (by debt financing scheme). Consumers and/or bondholders will gain extra disposable income because of tax cut, however, they do not spending more because of their increased disposable income (why?). This happen because of consumers and/or bondholders forward-looking on tax cut policy. they see that in the future, Government will rise tax to pay bonds with its interest, therefore the extra disposable income that they gained now will be used to pay future tax, rather than to be used for consuming something.

Based on that explanation, Kia (2006) then pointed out the relationship between debt financing and inflation with the basis of non-Richardian equivalent. He argued that consumers and/or bondholders do not have forward-looking of the tax cut policy. The core of Kia (2006)’s explanation is the increased debt financing because of tax cut, will lead to consumers and/or bondholders have extra
disposable income. The extra disposable income indicates that the wealth of nation is perceived to have gone up (because the consumers and/or bondholders will spend higher). A higher wealth will increase demand for goods and services and drives prices up (Kia, 2006). To sum up, this relation will be, tax cut will lead to government deficit to rise, leading to government borrowing more. If consumers and/or bondholders do not have forward-looking of the tax cut policy, then the policy will rise disposable income, and consumers and/or bondholders will spend higher, leading goods and services prices to rise. Other perspective comes from Seda (2009). By defining that government debt is a signal of deficit financing of a country, making government revenue the same as government expenditure will make inflation significantly reduce. Seda (2009) reported Indonesia in new order era that used this kind of budgeting to fight against hyperinflation in 1965-1966. The data reported by Seda (2009) showed as deficit budgeting reduce, inflation significantly reduce.

Table 1. State budgeting condition and inflation

<table>
<thead>
<tr>
<th>Year</th>
<th>(Deficit) / Surplus (in billion)</th>
<th>Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965 to 1966</td>
<td>(Rp 16,725) – deficit</td>
<td>639 per cent</td>
</tr>
<tr>
<td>1966 to 1967</td>
<td>(Rp 5,130) – deficit</td>
<td>113 per cent</td>
</tr>
<tr>
<td>1967 to 1968</td>
<td>Rp 0,-</td>
<td>85 per cent</td>
</tr>
<tr>
<td>1969 to 1970</td>
<td>Rp 27,160 - surplus</td>
<td>4,3 per cent</td>
</tr>
</tbody>
</table>

Source: Seda (2009) in “era baru kebijakan fiskal”.

The above Indonesian experience of new order gives an insight on how to manage inflation based on fiscal point of view. Based on above table, as deficit budgeting reduce, inflation significantly reduce, the surplus financing also followed by the significant decrease in level of inflation showed in the years of 69/70. The above table also explained that if government increase their debt, the structure of state budgeting will be deficit by assuming budget deficit starts from balanced budgeting. This condition will be followed by increased level of inflation.

3. RESEARCH METHOD AND DATA

Data

This research uses quantitative approach. Government revenue is proxied by tax revenue, the government debt is proxied by external debt stock, and inflation is proxied by consumer price index (CPI). All data are gathered from worldbank database from 1972 to 2016. Statistical tool that is used in this research is autoregressive and distributed lag (ARDL) bounds test approach developed by Pesaran, Shin and Smith (2001) (Known as PSS).

The advantage of this approach is that it applicable to a set of time series albeit series are I(0) and/or I(1) or in other words, the ARDL method was shown to work regardless of the order of integration the time series under consideration (Rushdi, Kim, and Silvapulle, 2012). Other advantage of this method is that it is more robust and performs better for small sample size than other co-integration technique (Akmal, 2007). Following Omar, Hussin, and Ali GH (2015), by using this approach, there are two hypotheses that will be examined. The first is to examine the long run relationship simultaneously (co-integration), and the second to study long run and short run for each of variables. The hypotheses of this research can be written in the table below (Omar, Hussin, and Ali GH, 2015).

Table 2. Research Hypotheses

<table>
<thead>
<tr>
<th>H</th>
<th>Research Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-1</td>
<td>General level relation</td>
</tr>
<tr>
<td></td>
<td>There is a general level relation between inflation with government revenue proxied by tax revenue and government debt proxied by external debt stock.</td>
</tr>
<tr>
<td>H-2</td>
<td>Partial level relation</td>
</tr>
<tr>
<td></td>
<td>There is a long run and short run relationship in government revenue to inflation</td>
</tr>
<tr>
<td></td>
<td>There is a long run and short run relationship in government debt to inflation</td>
</tr>
</tbody>
</table>

Model Specification and Research Method

Akmal (2007) explained that the underlying statistic of ARDL bounds test approach is familiar wald or F-statistics in a generalized Dickey-Fuller type regression which is used to test the significance of lagged variable under unrestricted equilibrium error correction model (ECM). Following Acaravci, Acaravci,
Ozturk (2011) re-arranged the model in this research, model specification below is used to examine hypothesis H-1 or the existence of long run relationship among variables simultaneously.

\[
\Delta \ln \text{inf} = a_1 + \sum_{i=1}^{p_1} \phi_{1i} \Delta \ln \text{inf}_{t-1} + \\
\sum_{j=0}^{q_1} \beta_{1j} \Delta \ln \text{GR}_{t-j} + \\
\sum_{k=0}^{r_1} \beta_{2k} \Delta \ln \text{GD}_{t-k} + \delta_1 \ln \text{inf}_{t-1} + \\
\partial_2 \ln \text{GR}_{t-1} + \partial_3 \ln \text{GD}_{t-1} + \hat{a}_{1t} \quad \text{(equation 1)}
\]

Taking \(\ln\) for natural log, \(\hat{a}_{1t}\) and \(\Delta\) stand for the white noise term and the first difference operator respectively. \(\text{inf}\) is inflation; GR is Government Revenue and GD is Government Debt. The Null hypothesis for no cointegration (non-existence of long-run relationship) for variable \(\text{inf}\) against alternative hypothesis is given as:

\(H_0: \delta_1 = \partial_2 = \partial_3 = 0\)

\(H_1: \delta_1 \neq \partial_2 \neq \partial_3 \neq 0\)

Omar, Hussin, and Ali GH (2015) explained for testing the above hypothesis by using the F-statistics where if the computed F-statistics is higher than upper bounds critical value, then null hypothesis will be rejected which means there are long-run relationships between government revenue and government debt to Inflation simultaneously.

After equation 1 of long run co-integration test model is computed, Acaravci, Acaravci, and Ozturk (2011) explained that if any evidence of long run relationship (cointegration), the next step is estimating the following long run and short run models respectively to test hypothesis H-2.

\[
\Delta \ln \text{inf}_t = a_2 + \sum_{i=1}^{p_2} \phi_{2i} \Delta \ln \text{inf}_{t-i} + \\
\sum_{j=0}^{q_2} \hat{a}_{2j} \Delta \ln \text{GR}_{t-j} + \sum_{k=0}^{r_2} \hat{a}_{3k} \ln \text{GD} + \hat{a}_{2t} \\
\quad \text{.... equation 2}
\]

\[
\Delta \ln \text{inf}_t = a_2 + \sum_{i=1}^{p_2} \phi_{2i} \Delta \ln \text{inf}_{t-i} + \\
\sum_{j=0}^{q_2} \hat{a}_{2j} \Delta \ln \text{GR}_{t-j} + \\
\sum_{k=0}^{r_2} \hat{a}_{3k} \Delta \ln \text{GD}_{t-k} + 0 \text{ECT} + \hat{a}_{2t} \quad \text{.... equation 3}
\]

\(\hat{a}\) is the coefficient of error correction term (hereafter ECT). It shows how quickly variables converge to equilibrium and it should have a statistically significant coefficient with a negative sign (Acaravci, Acaravci, and Ozturk, 2011). Before proceeding ARDL bound test, as explained by Akmal (2007) and Obradovic et al. (2017), unit root testing will be used for avoiding the possibility of certain variables being of the order I(2) or higher. This because if any presence of I(2) variables, the computed F-statistics are not valid because bounds test is based on the assumption that the variables are I(0) or I(1) (Akmal, 2007). Then after testing for Unit Root, Akaile Information Criterion (AIC) is employed to determine optimal lag length of ARDL \((p, q, r)\) as proposed by Gujarati and Porter (2009) with maximum lag is 6.

Then the last, as Gujarati and Porter (2009:254) explained that time series data may have not the same parameter of the model through the entire time period, or known as structural change, Shahbaz, Islam and Rehman (2016), and Bahmani Oskooee and Kanitpong (2017) proposed CUSUM and CUSUM sq test for the stability of the long run and short run coefficient because of any structural change in the period. The table below resume variables in this research.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation (Inf)</td>
<td>a general and ongoing rise in the level of price in an entire economy</td>
</tr>
<tr>
<td>Government Revenue (GR)</td>
<td>taxes are usually viewed as the only source of government revenue and also a dominant form of government finance (Rosen, 2005:15)</td>
</tr>
<tr>
<td>Government Debt (GD)</td>
<td>Total amount that a government borrows (Cambridge dictionary)</td>
</tr>
</tbody>
</table>


4. RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistic is defined as a number that convey a particular characteristic of a set of data (Spatz, 2008). In this research, there are inflation, government revenue and government debt that is presented in table below.
Table 4. Descriptive statistic

<table>
<thead>
<tr>
<th></th>
<th>Inflation (% CPI)</th>
<th>Gov. Revenue (% of GDP)</th>
<th>Gov. Debt (% of GNI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>11.47</td>
<td>14.17</td>
<td>52.89</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.49</td>
<td>0.42</td>
<td>3.96</td>
</tr>
<tr>
<td>Median</td>
<td>8.52</td>
<td>14.06</td>
<td>44.91</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>10.02</td>
<td>2.83</td>
<td>26.53</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>100.35</td>
<td>8</td>
<td>703.99</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>11.67</td>
<td>-0.58</td>
<td>7.42</td>
</tr>
<tr>
<td>Skewness</td>
<td>3.16</td>
<td>0.52</td>
<td>2.25</td>
</tr>
<tr>
<td>Range</td>
<td>54.86</td>
<td>10.28</td>
<td>142.88</td>
</tr>
<tr>
<td>Minimum</td>
<td>3.53</td>
<td>10.33</td>
<td>25.29</td>
</tr>
<tr>
<td>Maximum</td>
<td>58.39</td>
<td>20.61</td>
<td>168.18</td>
</tr>
<tr>
<td>Sum</td>
<td>516.17</td>
<td>637.87</td>
<td>2380.09</td>
</tr>
<tr>
<td>Count</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>

Source: Researcher, 2018

From descriptive statistics above, the highest level of inflation is 58.39% and the lowest rate is 3.53%. Summing up all the data, the total of inflation from observation date is 516.17%, with average rate (mean) is 11.47% from period 1972 to 2016. For Government revenue, the highest level is 20.61%, the lowest rate is 10.33%, and the total of government revenue proxied by tax revenue is 637.87% with average rate (mean) is 14.17%. Highest level of Government debt from GNI is 168.18% and the lowest rate is 15.29%, summing up all the data, the total percentage of government debt of GNI from observation date is 2380.09% with average rate (mean) is 52.89%. For the measurement of dispersion, range that measure the difference between the greatest and the smallest (Mirer, 1995) in inflation data set shows 54.86 per cent, government revenue is 10.28% and government debt is at 25.29%.

Other measurement of dispersion can be gained by squarring all deviations for each of observed printed money data and summing all of them and calculating their mean by dividing with the full data set minus 1 (n-1, number of degree of freedom) and square rooting the result. By doing so, standard deviation will be gained and from data above, the standart deviation of inflation shows 10.02 per cent Government revenue is 2.83 and government debt is 26.53.

The value of the middle observation of inflation, government revenue and debt after the observations have been ordered from smallest to largest (Mirer, 1995) or, median value, is 8.52% for inflation, 14.06 for government revenue, and 44.91 for government debt. Standard error that measures the precision of estimated related variables (Gujarati and Porter, 2009) is 1.49% for inflation, 0.42 for government revenue, and 3.96 for government debt. For studying the “shape” of a probability distribution, then skewness and kurtosis is used (Gujarati and Porter, 2009).

Skewness will be gained from data distribution that uses the relationship between the mean and median. Spatz (2008) explained that as the mean is larger than the median then the distribution can be expected to be positively skewed whereas if there is a smaller mean than median, it can be expected to be negatively skewed distribution. In inflation data, skewness shows 3.16 per cent which means the data has larger mean than median, or positively skewed.

In government expenditure, 0.52 and 2.25 for government debt, meaning that all data are positively skewed.

Furthermore, to see the tallest or flatness of the data, kurtosis is used in the analysis. Gujarati and Porter (2009) explained that if the value of kurtosis is less than 3, then called platykurtic (flat or short-tailed), if the value of kurtosis is more than 3 it is called leptokurtic (slim or long-tailed) and if the value of kurtosis is 3, then it is called mesokurtic. Inflation and government debt data set have 11.67 and 7.42 respectively, more than 3 which, which mean they are leptokurtic (slim or long-tailed). Only government revenue is called platykurtic because has less than three of the value of kurtosis.

Unit Root Test

Akeike Information Criterion (AIC) will be employed to gain the lag length in ARDL approach automatically. From AIC, the optimal length for lag is ARDL (1, 6, 6). Furthermore, the result of ADF test for each variables is presented as follow,
Table 5. Unit root testing using the ADF test

Based on that result, to reject null hypothesis, value of F-statistics must be above upper bound proposed by the system. F-statistics shows 5.896, higher than upper bound 4.85 at the 5% level of significance, meaning that H0 can be rejected or it can be concluded based on the general level relation that there is a general level relation between government revenue and government debt on inflation in Indonesia, or the model is co-integrated, or has long run relationship simultaneously.

**Test for Short-run and Long Run**

As the model in equation 1 is co-integrated, then equation 2 and 3 will be analysed to know the long run and short run relationship individually for testing the H-2 hypothesis. For long run relationship, the table below shows the result.

**Table 7. The long run coefficient**

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln GR (Gov. Revenue)</td>
<td>1.008</td>
<td>0.036</td>
</tr>
<tr>
<td>Ln GD (Gov. Debt)</td>
<td>0.733</td>
<td>0.001</td>
</tr>
<tr>
<td>C (Constanta)</td>
<td>-3.370</td>
<td>0.030</td>
</tr>
</tbody>
</table>

**Diagnostic Tests**

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial Correlation</td>
<td>0.089</td>
<td>0.914</td>
</tr>
<tr>
<td>Normality</td>
<td>0.025</td>
<td>0.987</td>
</tr>
<tr>
<td>Heteroscedasticity</td>
<td>1.489</td>
<td>0.189</td>
</tr>
</tbody>
</table>

Source : Researcher’s own computation

Table 8. The short run coefficient with Error Correction Model

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ Ln GR (Gov. Revenue)</td>
<td>1.174</td>
<td>0.010</td>
</tr>
<tr>
<td>Δ Ln GD (Gov. Debt)</td>
<td>0.679</td>
<td>0.038</td>
</tr>
<tr>
<td>ECT_{t-1}</td>
<td>-0.809</td>
<td>0.000</td>
</tr>
</tbody>
</table>

ec = inflation - 1,008*gov. Revenue - 0.733*gov. Debt + 3,370*Intercept

Source : Researcher's own computation, 2018 (Using Eviews 9).
In the long run, each variable has significant effect on inflation with different level. Government revenue affects inflation in the long run positively by 1.008% at 5% level of significance, whereas government debt affects inflation positively by 0.73% at 1% level of significance. This result also confirms theoretical foundation that argues the government revenue and debt is an inflationary process. This result also supported when see the result of short-run coefficient.

In the short run, one per cent increase in government revenue will rise an average 1.17 per cent increase in inflation with 5% level of significance. The short run coefficient result shows that government revenue has higher impact on inflation than in the long-run. For the government debt, that kind of policy on average will affect inflation by 0.68% in the short run with 5% level of significance, smaller coefficient rather than the impact gained in the long run that reach 0.73%.

The above result figures out fiscal policy in national government in Indonesia. If the government increase its revenue by one percent, in the short run, the revenue contributes to increasing level of inflation by 1.17% but the effect will fall in the long run by 0.17 per cent. If the government increase debt by one per cent, the debt contributes 0.68% on increased level of inflation in the short run and increase by 0.054 per cent in the long run.

From the table 8 above, error correction has the negative sign and significant at 1% level, meaning that adjustment process of the disequilibrium in the short run will be fixed (eliminated) in the long run (Hasan and Nasir, 2008) for about 80.9%. Following Ariefianto (2012) to interpret ECT coefficient, the disequilibrium in the short run will be fixed to the equilibrium in the long run for about 1.23 month (1/0.809).

Stability Test for Parameter

Furthermore, to test whether the regression coefficients are generally stable over the sample period (Omar, Hussin and Ali GH, 2015), Hasan and Nasir (2008) used CUSUM and CUSUMSQ plots. The plots are depicted as follow.

As depicted above, Hasan and Nasir (2008) explained that when CUSUM and CUSUMSQ are within the critical bounds of 5%, it indicates that the model is structurally stable. By this study, the effect of government revenue is higher than government debt on inflation, meaning that to control level of inflation, increased government revenue should be followed by taming level of government debt or vice versa. These policy will also affect the regional government’s budgeting and level of inflation regionally.

5. CONCLUSION

This research try to prove that fiscal policy in the form of government revenue and government debt is an inflationary process, meaning that increase and decrease of these variables will be followed with increase and decrease level of inflation positively. According to co-integration test, government revenue and debt simultaneously has a long run relationship on level of inflation. When studying each independent variables individually, in the short run, government revenue contributes to increasing level of inflation by 1.17% and government debt contributes 0.67%. In the long run, the effect of government revenue on inflation is 1.008% whereas government debt on inflation is 0.73%. The ECT coefficient shows...
the right result (negative sign and significant at 1% level of significance) and the parameter shows stable from structural break based on CUSUM and CUSUMsq.

6. REFERENCES


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