Procyclical Fiscal Policy And The Role Of Fiscal Rule In Indonesia

Ida Alqurnia, Lilis Yuliati, Zainuri

Abstract: Fiscal policy carried out by the government to intervene in the economy has an impact on business cycle fluctuations, while policies that are often used by developing countries are procyclical fiscal policy, while fiscal policies in 96 countries are limited by the fiscal rule including Indonesia stipulated in Law Number 23 of 2003 Therefore, the purpose of this paper is to find out how the role of the fiscal rule is in fiscal policy and the business cycle in Indonesia by using the GGM Time series analysis method. This research was conducted in the period 1984-2017. The results of the analysis show that of the four variables used as independent variables namely public debt, fiscal rule, fiscal primary balance, and the relationship of fiscal regulations with public debt, there is only one variable that has a significant effect, namely the fiscal regulation relationship variable with public debt but has negative relationship. These results indicate that the fiscal rule in Indonesia has a role in controlling the level of Procyclical fiscal policy carried out by the government.

Keywords: Fiscal Rule, Fiscal Policy, Business Cycle, and Public Debt.

1. INTRODUCTION

Fiscal policy is one form of government intervention in maintaining the stability of the country's economy. This is in accordance with the theory put forward by Keynes which revealed that fiscal policy has a stabilizing role in the economy (Alberola and Montero 2006; Cogan et al. 2009; Ferrarini, et al. 2012). On the other hand, fiscal policies that are often used by developing countries to maintain economic stability are expansionary and procyclical fiscal policies (Cuadra, et al. 2010; Ghate et al 2016; Michaud and Rothert 2018). Expansive fiscal policy that is often used by the government is increasing its expenditure to provide subsidies and transfers both directly and indirectly to the public (Michaud and Rothert 2018). Research conducted by Alberola and Montero (2006) revealed that procyclical fiscal policy in developing countries was caused by the use of debt in financing the increase in expenditure. While the research conducted by Crichton et al. (2015) show that fiscal policy is often used in OECD countries namely countercyclical fiscal policy.

The use of debt as a form of financing in increasing government expenditures is closely related to the condition of fiscal space and the fiscal rule owned by each country (Kim et al. 2011; Ohnsorge 2016). The condition of the fiscal space possessed by a country greatly determines how much debt should be used by the government to cover its costs (Kim et al. 2011). On the other hand, the use of debt caused by the existence of a deficit in the balance of the budget is also limited by the fiscal rule in each country. In general, the fiscal rule has four instruments, namely the Budget Balance rule, Debt Rule, Revenue Rule, and Expenditure Rule (Lledo et al. 2017; Luc et al. 2017). The country's financial regulations are formed with the aim of maintaining State financial stability and sustainability of fiscal policies (Kumar et al. 2009; Lledo 'et al. 2017; Luc et al. 2017; Tapsoba 2012).

(Combes et al.2017) found that basically fiscal policy responds to business cycles with countercyclical policies, but the fiscal policy cycle depends on the level of debt owned by each country. Various countries that have a debt level above 87% of GDP fiscal policy responses to the business cycle tend to be procyclical, but the Fiscal rule held by some countries can reduce the Procyclical level of fiscal policy. Research conducted by Badinger and Reuter (2017) found that countries with a strict fiscal rule have greater fiscal space and fiscal balance, indicating that countries with strict fiscal rules have state financial stability and greater sustainability of fiscal policy. This is because countries that have fiscal space and large fiscal balances can make sudden increases in their expenditures without disrupting the country's financial balance and expenditures previously planned. Similar research was also carried out by Guerguil et al. (2017) who found that the impact provided by the fiscal rule on economic growth depends on the flexibility of the fiscal rule. Jalles (2018) examines the impact of the fiscal rule on fiscal countercyclical policies in 60 countries, the results of this study indicate that the application of Fiscal rule increases government discipline in the use of budget deficits and debt use, but it also depends on institutional conditions of each country . In addition, the study also found that the fiscal rule can reduce the level of countercyclical fiscal policy in 60 research countries. Overall, there are 96 countries that have a fiscal rule in the world with various characteristics and fundamental conditions of the country (Lledo et al. 2017). One developing country that applies the fiscal rule in the Asian region, namely Indonesia. In an IMF article written by (Lledo 'et al. 2017) explaining that Indonesia has implemented a fiscal rule since 1967 with 1 rule, namely the Budget Balance Rule which was later changed in 2004 to 2 regulations, namely Budged Balance Rule and Debt Rule. The fiscal rule that applies in Indonesia is the Budget Balance Rule which should not exceed 3% of GDP, and the Debt Rule which should not be more than 60% of GDP. These regulations are regulated in the 2004 State and Government Finance Act. These regulations also apply to all governments in Indonesia, both central and regional governments. After the monetary crisis in 1998 and the global financial crisis in 2008 the Government of Indonesia used both domestic and foreign debt to finance increased expenditure to maintain the stability of the country's economy (Indonesian

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Ministry of Finance 2009), as shown in Figure 1.

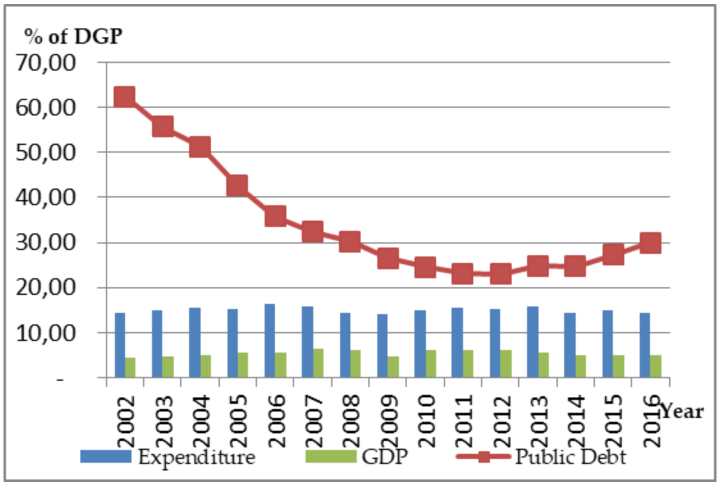

Figure 1. *Dynamics of Government Expenditures, Public Debt, and Economic Growth in Indonesia. (Source: World Bank, 2018 and IMF, 2018)*

Figure 1 shows that the ratio of debt to GDP in Indonesia has a declining trend from 2002 to 2011, but in 2012 to 2016 the ratio of debt to GDP in Indonesia has again increased, the increase in the ratio is due to the high increase in expenditure which is considered ambitious, even though thus, the level of the budget deficit and government-owned debt ratios is low from the fiscal rule that is enforced (OECD, 2016: 15). An increase in government spending in Indonesia after the 2008 global financial crisis was directed towards subsidies and social assistance to the community to reach 14% of the total budget (OECD 2016: 15-16). From these expenditures the government hopes to be able to maintain people's purchasing power, so that the government can maintain the inflation rate in accordance with the set targets to maintain economic growth amid the turmoil in the exchange rate after the global financial crisis (Indonesian Ministry of Finance, 2009). Based on the description above, it can be concluded that the implementation of the fiscal rule in a country has a role in determining the direction of fiscal policy determined by the governments of each country. Therefore, in this paper we will discuss the role of the fiscal rule in the cyclical fiscal policy in Indonesia.

2 PREVEOUS RESEARCH

Research conducted by Spilioty and Vamvoukas (2015) synthesis of the literature which states that the accumulation of a country's public debt will have a negative impact at a certain level. Therefore, a study conducted by Spilioty and Vanvoukas (2015) also calculated how much the debt ratio would have a positive impact on the economy. The calculation results then reveal that the level of debt accumulation will have a negative impact if the debt accumulation level reaches 110% and above. and if the level of debt accumulation of a country is still below 110% then the debt will still have a positive impact and be able to increase economic growth. Research on the cyclicality of fiscal policy was also carried out by Crichton et al., (2014). He examines the procyclical and countercyclical multiplier of fiscal policy in OECD member countries, but this research takes a different point of view, namely the multiplier cyclicality of fiscal policy. This research is motivated by the phenomenon of the global financial crisis which is then followed by a recession in the economy. The deteriorating economic conditions at the time made the governments in industrialized and developing countries adopt policies in the form of increased government spending through policy packages. On the other hand, the multiplier of fiscal policy packages especially government spending in theory and reality varies greatly, ranging from positive to negative values. Another reason underlying the research of Crichton et al. (2014) namely the magnitude of the fiscal policy multiplier depends on the degree of openness of the country, the exchange rate regime adopted, and the business cycle in the country. The rationalization of the link between the fiscal policy multiplier and the business cycle is the issuance of fiscal policy by policy makers when the economy is in a bad state or in a recession. The method used in the research of Crichton et al. (2014) namely Smooth Transition Vector Autoregressive Model (STVAR). The reason for using the STVAR method is the difference in economic conditions used as research objects by Crichton et al. (2014) namely the multiplier of government policy during a recession and expansion. The variables used in this study are government expenditure, GDP and forecast error. Based on the background, methods and variables used in the study show that in the long run the government expenditure multiplier as a fiscal policy at the time of recession has a small value. This means that Fiscal policy multipliers in OECD countries are procyclical. (Combes et al. 2017) found that fiscal policy in 56 countries in 1990-2011 had a countercyclical nature, but the relationship between the business cycle and fiscal policy was not linear. In addition, (Combes et al. 2017) also found that countries with a debt to GDP ratio above 87% changed the cyclicality of fiscal policy to be procyclical, on the other hand, not all fiscal rules applied in each country could reduce procyclical policies due to debt ratio which is above 87%.

3 DATA AND RESEARCH METHODOLOGY

The data used in this paper are secondary time series data obtained from the International Monetary Funds (IMF) and the World Bank. The research period used in this paper is that from 1984 to 2017 the aim of the vulnerable selection of research time is to see how the role of the fiscal rule comes into force until 2017, besides the most fundamental reason for timing is the availability of data used. Then, the method used in this paper is the time series Generalized Method of Moment (GMM) method. The reason for using the GMM time series method, the GMM method, is one of the regression analyzes developed from error term theory that is used to test whether current empirical conditions are still relevant to the theory being tested (Greene, 2012: 468). In the GMM method there is also a variable called the Instrument variable, which in the presence of these variables it is expected that the test results show a greater degree of influence between the dependent and independent variables. The model used in this paper was adopted from the research model conducted by Combes et al. (2017), Badinger and Reuter (2017), and Guerguil et al. (2017). The model used in this paper is shown in the econometric equation in general in equation 01.

$$OG_t = \beta_0 + \beta_1 PD_t + \beta_2 \omega FR_t + \beta_3 PFB_t + \beta_4 \zeta(FR_t.PD_{t-1}) + \varepsilon_t \qquad (01)$$

The model 1 equation is then transformed into writing the

GMM time series model in general as in equation 02.

$$OG_{jt} = \beta_0 + \beta_1 PD_{jt} + \beta_2 \omega FR_{jt} + \beta_3 PFB_{jt} + \beta_4 \zeta(FR_{jt-}PD_{jt-1}) + \varepsilon_t \quad (02)$$

In the model used in this paper there are 4 variables, namely the Output gap (OG) which explains the business cycle conditions in the State of Indonesia, the second variant is the Public Debt Cyclicity (γPD) which describes how the public debt response as a form of fiscal policy to cycle fluctuations business, then the third variable is the fiscal rule (FR) which describes the number of fiscal regulations applied in Indonesia, then the fourth variable is fiscal policy in this paper in proxy with Primary Fiscal Balance (PFB) which describes the budget balance that covers all expenditures except debt interest payments, and the last is the relationship variable regulation of fiscal policy to public debt (FR * PDt-1).

4 RESULTS OF ANALYSIS AND DISCUCCION

As explained in section B. Data and methodology, the analysis tool used in this paper is the GMM time series method. Before analyzing the data using the GMM method, the research data was first tested for data stationarity using the Unitroot Augmented Dicckey-Fuller test in each variable. The data stationarity test results are shown in table 1.

Table 1. *Data Stationarity Test Results with Augmented Dicckey-Fuller*

Variable	Level		First Difference		Second Difference	
	Probb. ADF	Information	Probb. ADF	Information	Probb. ADF	Information
OG	0,0720	**	0,0062	*	0,0000	*
PD	0,1397	-	0,0088	*	0,0000	*
FR	0,0917	**	0,0000	*	0,0000	*
PFB	0,7917	-	0,0000	*	0,0000	*
FR*PDt -1	0,5763	-	0,0006	*	0,0000	*

Remarks = -) not stationary, *) Stationary with α 5%, **) Stationary with α 10%.
(Source: Results of data analysis, processed).

Based on the results of stationarity test shown in Table 1 shows that there are only 2 stationary variables at the level level with a level of α 10%, namely varaibel Ouput Gap (OG) and the fiscal rule variable (FR). While the stationary data test at the first Difference level shows that all the data used are stationary with a level of α of 5%, the same results are also indicated by the results of the stationary test of the second difference level data. Overall, the data used in this paper does not meet the data stationary requirements at the level, therefore a treatment is needed on the research data, that is, the data must be stressed first so that the data becomes stationary at the level. After the data used is stationary at the level level, the data analysis is performed using the GMM time series method. The results of data analysis using the GMM time series method are shown in table 2.

Table 2. *Results of Analysis of the GMM Time Series Method*

C	PD	FR	PFB	FR*PDt-1	J-Statistic
-5.12E+09	6.78E+08	-3.56E+09	6.35E+09	-7.73E+10	3.054411*
	[1.586238]	[-0.759039]	[1.047188]	[-2.001405]	
	(0.1239)	(0.4542)	(0.3040)	(0.0531)	

Description: Without marks = Value of variable parameters
Sign [] = Value of T statistic
Sign () = Probability Value
Sign * = J-Statistics value <Chi Square value (43,74518)
(Source: Data Analysis Results, processed)

Table 2. Shows that of the four variables that are considered to affect the business cycle in Indonesia, there is only one variable that affects significantly. Variables that affect the business cycle in Indonesia are negative and significant, namely the fiscal rule relationship variable to the use of public debt the previous year (FR * PDt-1) which has a significance value of 0.0551. Another variable that has a negative relationship to the business cycle in Indonesia is the fiscal rule (FR) variable, although it does not significantly affect the business cycle. Then two other variables, namely the public debt variable (PD) and fiscal balance primary (PFB) have a positive relationship even though it does not significantly affect the business cycle in Indonesia. The fiscal rule relationship with public debt the previous year illustrates the government's compliance in complying with the fiscal rule that has been established in relation to the limits of the government in using public debt in the previous year to meet government spending. Therefore, based on the results of the analysis presented in Table 2, it can be interpreted that government compliance in compliance with the fiscal rule in relation to the debt usage regulations (Debt Rule) has a negative impact on the business cycle in Indonesia. This means that government compliance with the debt usage regulations stipulated in the fiscal rule has an impact on reducing business cycle fluctuations in Indonesia (Combes et al. 2017; Kuncoro 2016). This shows that the fiscal rule in Indonesia related to debt regulation has a role in reducing the procyclical level of fiscal policy. The limit of debt usage contained in the fiscal rule in Indonesia aims to maintain the stability of state finances, so that the government can maintain debt sustainability, which means that the government can give confidence to debtors that the government has the ability to repay debt and not be caught in the risk of default . Debt regulations in Indonesia began to be implemented in Indonesia in 2004 as stipulated in the State Finance and Government Act No. 23 of 2003. The dynamics of the use of public debt in Indonesia from 1984-2017 are shown in Figure 2.

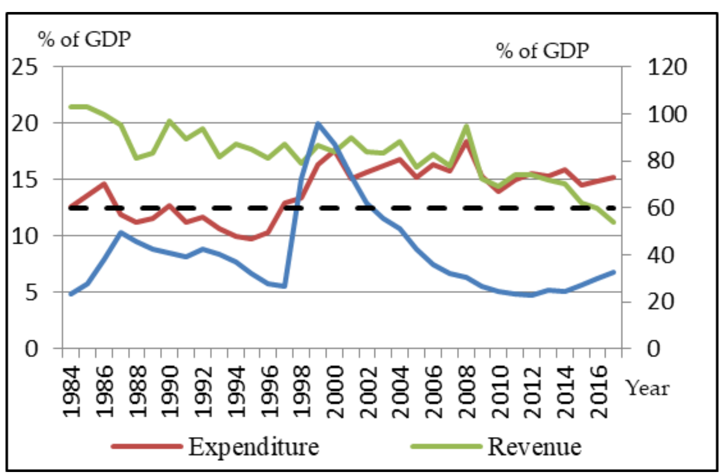

***Figure 2**. Dynamics of public income, expenditure and debt in Indonesia in 1984-2017. (Source: World Bank, 2018; IMF, 2018)*

Figure 2 shows the dynamics of debt use in Indonesia before and after the regulation of debt usage in Indonesia. Figure 2 shows that after the regulation of debt usage, the level of debt used by the Indonesian government is lower and far below the safe limit with a range of under 30% of GDP starting in 2006. On the other hand, the debt used by government is two types of debt, domestic debt and foreign debt. In addition, the form of debt used by the government is not only in the form of money from the sale of Government Securities but also in the form of development projects carried out by the State. Therefore, the impact of the use of debt does not have an effect on output fluctuations in the short term, but this will have an effect on increasing output in the long run (Bank Indonesia 2016). Fiscal rule variables have a negative relationship to the business cycle in Indonesia, although they do not affect significantly. This is due to the fiscal rule in the form of both budget balance regulations and debt regulations that have no effect on economic actors in making business decisions. The negative relationship between the fiscal rule and the business cycle shows that budget balance regulations and debt regulations have an impact on reducing the number of outputs in Indonesia, although not significantly. The fiscal primary balance variable also does not significantly influence the fluctuations in the business cycle in Indonesia despite having a positive relationship. This shows that the amount of government revenues and expenditures in Indonesia does not affect fluctuations in the business cycle, this is due to the vulnerability of government research to focus more on policies to improve community welfare especially after the monetary crisis of 1987/88 and the 2008 global financial crisis (Indonesian Ministry of Finance 2009; Kuncoro 2016). Both of these crises gave a shock to the Indonesian economy both in the financial sector and in the real sector. On the other hand, the factor that drives economic growth in Indonesia is domestic demand, therefore in order to maintain economic growth policies issued by the government focus more on providing subsidies and welfare assistance to the public with the aim of maintaining people's purchasing power. So that the government can keep the inflation rate fixed on the targeted corridor (Bank Indonesia 2011). The last variable is the public debt variable, based on the results of the analysis shown in Table 2, the variable public debt has a positive relationship to the business cycle in Indonesia, although it does not have a significant effect. The results of the analysis show that increased use of debt by the Indonesian government which is then used to increase its expenditure in the form of productive and consumptive expenditures will have an impact on increasing the business cycle. This means that an increase in government debt will have an impact on increasing output fluctuations in Indonesia. However, this increase did not significantly affect output fluctuations, this was caused by an increase in spending made by the Indonesian government in the study period, mostly used for consumptive expenditures. This was caused by the shock of uncertainty in the global economic conditions after the global financial crisis in 2008, so as to maintain the stability of the economic fundamentals the government prioritized consumptive expenditures (Bank Indonesia 2011, 2016). On the other hand, various productive government expenditures are aimed at the long term, therefore, an increase in the business cycle will occur in the future or in the long term.

5 CONCLUCTION AND SUGGESTIONS

Based on the results of the analysis above, it can be concluded that the variables that affect the fluctuations in the business cycle in Indonesia in the period 1984-2017 are the relationship variable fiscal policy rules to public debt (FR * PDt-1) which describes government compliance in implementing the debt rules in the fiscal rule significance level of (0.531). Then other variables, namely the public debt variable, fiscal rule, and primary fiscal policy balance (primary fiscal balance) do not significantly affect the fluctuations of the business cycle in Indonesia. However, when viewed from the relationship that is owned, the variable public debt and Fiscal primary balance have a positive relationship to the fluctuations in the business cycle, while the fiscal rule variable and the relationship of fiscal policy regulations to public debt have a negative relationship. Then based on the discussion above it can be concluded that the government's compliance with debt regulations has the role of controlling the fiscal policy procyclicality carried out by the government, besides that, government expenditure in the period 1984-2017 which is more consumptive does not significantly impact the business cycle. However, government spending which is more prioritized on consumptive expenditure is caused by the impact of the monetary crisis of 1987/88 which was also followed by the 2008 monetary crisis. Therefore, in order to maintain fundamental economic stability the government focused more on consumptive expenditure.Based on the results of the analysis and discussion above, the policy that can be taken by the government is increasing income both in terms of tax and non-tax in order to improve the condition of Indonesia's fiscal space. The increase in income from the tax side that can be done by the government is by expanding the tax object. In addition, the policy that can be taken by the government to increase fiscal space is by carrying out fiscal consolidation at both the central government and regional governments. Then to achieve sustainable growth and development the government should prioritize expenditures in productive sectors so that the fiscal policies taken can form fiscal sustainability.

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