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Original Paper

Do Financial Arrangement of the International Monetary Fund Has Impact on the Reduction of Government Spending, Evidence through Political Fiscal Cycles, the Case of Croatia

Ivana Rukavina[1*]

[1] Doctoral candidate, University of Zagreb, Faculty of Economic, Croatia

[*] Ivana Rukavina, Doctoral candidate, University of Zagreb, Faculty of Economic, Croatia

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Abstract

This paper examines the regulatory role of the IMF on government spending through political fiscal cycles. According to theoretical views, the fiscal policy in the pre-election period reflects an increase in government spending or budget expenditures; in postelection period, it takes a restrictive course by reducing spending. In the presence of a contractual agreement with the IMF, the theory points to limiting and reducing the magnitude of government spending in the pre-election period. According to the research results in Croatia, there is an increase in government spending in the election quarter, and its decrease in the quarter after the election. On the other hand, the contractual arrangements with the IMF show significant reductions in government spending. When a country is under a contractual obligation with the IMF, it reduced the government spending in the pre-election period in relation to the period when it is not under a contractual obligation.

Keywords

International monetary fund programs, political fiscal cycle, Croatia

1. Introduction

Fiscal consolidation has become a matter of fist order after the global world crisis in most sovereign and democratic states. Restraining the high levels of deficit and public debt, which inevitably affects the destabilization on the economy is also a question of political competence. Apart from general economic goals (redistribution of income, economic stabilization, and allocation of public goods), the political body is planning its mandate and achieving its own goals, which is realizing the re-election. Maintaining political choices through creation of high public spending results in a deficit, increase of

public debt and inflationary pressures. In the pre-election period, the fiscal policy is expansive; while in postelection period it should be restrictive. However, the restriction of fiscal policy does not necessarily mean that it neutralizes the fiscal expansion of the pre-election period, but rather that it is geared towards restoring government spending to a normal level. Without external and internal pressures, the political body can easily fall into a deficit spiral, particularly if there is an incompetent political body in power that has also achieved a re-election. The internal pressures are mostly reflected in established fiscal rules, such as fiscal rule that legally limits the increase in public consumption; fiscal rule of public debt that limits the increase of public debt above a certain level; or, for example, a fiscal revenue rule. The external fiscal constraints arise from internationally defined contracts that serve, among other things, for the stabilization and consolidation purpose of public finances. Such limitation also includes a contractual obligation with the International Monetary Fund (IMF). Through the financial arrangements with the IMF, and the IMF conditionality system, the recipient of a financial loan is subject to internationally defined public finance balancing regimes so that it can ultimately access the entire amount of the loan.

This paper discusses the role that the IMF in reducing the government spending through the election period, when it is, according to theoretical perspectives, expansive. Croatia was taken as an example, which had four contractual obligations with the IMF in the period from 1994 through 2006. The following discussion provides a theoretical framework of political fiscal cycles and considers the theoretical role of the IMF in the reduction of government spending and reduction of the cycle magnitude. Furthermore, the empirical analysis verifies the thesis that a country that has a contractual obligation with the IMF has less exposure in the pre-election expansion. The last part represents the concluding considerations.

2. Literature Review

2.1 Theory of Political Fiscal Cycles

Theoretical considerations agree in the fact that political fiscal cycles are characterized by expansive pre-election public consumption and deficit creation (Efthyvoulou, 2010; Gregor, 2015; Alesina et al., 1992). The reason for this is the political stimulation of the economy necessary in order to achieve political re-election (Heckelman & Whaples, 1996). The historical development of the political fiscal cycles theory stems from the limitations of model and empirical settings of political-business cycles developed by Nordhaus (1974) and Hibbs (1977), more precisely for the purpose of granting independence to central banks. The first models of political-business cycles used the monetary policy as the main driving force, which influenced the pre-election decline in the unemployment rate. By developing the theory of rational expectations, and by regulating central bank independence by leaving only fiscal policy as a means of influencing the electorate, the fiscal policy takes over the main driving force of signaling the political competence of the electorate.

The disadvantages of implementing such a method of fiscal policy management bring inflationary

expectations, create budget deficits and increase in public debt. As political elections are held every four or five years, and the pre-election stimulation of the economy begins to develop up to a year before the election, while the cycle reaches its peak just before the election, results in the short-term use of the budget with the long-term consequences. In other words, fiscal consolidation measures are needed.

Fiscal restriction as a safeguard mechanism from the negative consequences of pre-election fiscal expansion appears in the form of fiscal rules that limit the implementation of politically motivated fiscal policy (Rose, 2006); fiscal transparency that influences the information of the electorate by its involvement in the process of budgeting and budget spending, with the reduction of pre-election government spending as the result (Alt & Lassen, 2006); also, the fiscal consolidation is linked to the degree of development of the country and democracy, so new democracies have recorded higher use of spending in the pre-election period (Brender & Drazen, 2005); with a lower information asymmetry between the political and the electoral body, the political fiscal cycles are considerably reduced, which is a result of increased availability of information and the development of information literacy of the electorate (Shi & Svensson, 2006).

2.2 Empirical Works of Interaction IMF and Political Fiscal Cycles

One of the determinants of the fiscal policy cycles are the international contract. As such, they represent a financial arrangement with the IMF. Fiscal discipline and the conduct of stabilizing fiscal policies are contained in many IMF assistance programs. The role of the IMF can be viewed as an external pressure to balance the budget (Lassen, 2010). However, a somewhat different view suggests that the approval of IMF loans indirectly encourages a country to conduct fiscal expansion by awarding financial lending before the election process (Bastoni, 2006). An implicit item that limits pre-election fiscal expansion lies in the conditionality program contained in the IMF financial agreements.

The condition-based system regulates the financial environment that a country needs to ensure in order to access the entire amount of the approved loan. A condition-based policy seeks to secure a sustainable macroeconomic policy that, along with fiscal policy constraints, also contains constraints for political representatives when it comes to using fiscal policy for pre-election purposes (Ebeke & Ölcer, 2013). However, although the IMF pays the entire amount of the loan after all agreed conditions have been fulfilled, the exceptions are noted when the total amount is withdrawn in a case of economic progress and/or for political reasons (Dreher, 2005).

The empirical research conducted by Dreher i Vaubel (2004) Generalized Least Squares methodology confirms a higher budget deficit when the higher amount is borrowed from the Fund, also, that the amount borrowed increases in the electoral period, which encourages the creation of a political fiscal cycle. In addition, the IMF reduces lending if the deficit of the current year is higher than the deficit of the previous year. The research concludes that the conditionality system did not stop the pre-election increase in borrowing. Ex-ante conditionality may partially prevent a country from entering into a credit engagement with the IMF if the pre-election fiscal expansion is high, while the Ex-post

conditionality does not prevent a country from using the loan to finance pre-election expansion. The conditionality is largely related to the future mode of action.

Bastoni (2006) in its research shows that the access to the IMF loans leads to a stronger political motivation for creating pre-election fiscal expansion. It also states that the Fund has an incentive to increase the amount of credit linked to the prestige, which results from the ability to make important business deals. The research examines the impact of the IMF's credit on the increasing re-election probability by increased lending in the pre-election period. The findings confirm the increased lending in the mandate of right-wing political parties, and the fact that the increased lending exposure directly leads to a greater deficit in the election year, i.e., lending results in creating political fiscal cycles.

Hyde, O'Mahony (2010) shows the impact of the international scrutiny on pre-election fiscal stimulus and proves that it is less likely to be grounded under the IMF arrangement. In addition, the most important item that is highlighted is the conditionality system that monitors whether a country fulfills the program's commitments (a sustainable macroeconomic policy associated with fiscal consolidation). A country that is under a contractual obligation with the IMF is under greater control when it increases the expenditure side of the budget, thus limiting the pre-election period in signaling its competence. Also, the argument that supports this fiscal restraint lies in the informative power of the IMF's reports that help creditors with risk mitigation.

The research conducted by the Ebeke i Ölcer (2013) dynamic panel model confirms the political fiscal cycles by increasing government spending and creating a deficit; two years after the elections, highlighting the features of fiscal consolidation by reducing the investment spending and increasing budget revenues; but the undertaken fiscal consolidation is not strong enough to neutralize the pre-election expansion. The specificity of their research has been demonstrated by a lower pre-election fiscal expansion if a country is under a contractual obligation with the IMF. Funding through the conditionality system encourages the country to adopt a sustainable macroeconomic policy; conditionality constrains public finances, leading to a reduction in the use of fiscal policy for election purposes.

As it is clear from the analysis, there is no single consensus on the influence of the IMF on the political fiscal cycle, it is justified to notice the position of Vaubel (1991) who statement "IMF lending facilitates the expansion. IMF conditionality facilitates the contraction. In this way, the IMF tends to contribute to the generation of political fiscal cycles" (according to Dreher & Vaubel, 2004).

3. Election Policy and IMF Arrangement in the Republic of Croatia

The election processes in Croatia are characterized by changes in power of the two largest parties, the Croatian Democratic Union and the Social Democratic Party of Croatia. From the period of the first parliamentary political elections that took place in 1992, the two parties have been alternating in mandates that lasted for four years. So far, there have been seven regular and one early elections that took place in 2016. The parliamentary elections that took place since 1995 are taken into account

during the testing.

Table 1. Parliamentary Elections in Croatia

Date of election	Results
August 2,1992	Victory of Croatian Democratic Union (CDU)
October 29, 1995	Victory of (CDU)
January 3, 2000	Victory of Social Democratic Party of Croatia (SDP) with his coalition partners
November 23, 2003	Victory of CDU with his coalition partners
November 25, 2007	Victory of CDU
December 4, 2011	Victory of SDP with his coalition partners
November 8, 2015	Victory of CDU with his coalition partners
October 11, 2016	Victory of CDU

Source: State Electoral Commission of the Republic of Croatia, http://www.izbori.hr/ws/index.html

The IMF's presence in Croatia can be traced through several used financial arrangements, i.e., the Stand-by arrangement in 1994 that was paid off in 1999; Systematic Transformation Facility, which was approved in 1994 and completed in 2002; Extended Fund Facility from 1997 that was completed in 2000; and three Stand by arrangements that were approved as a precautionary measure from 2001, 2002 and 2003. These arrangements are linked to the transition period through which Croatia passed in the 1990's.

Table 2. IMF Arrangement with Croatia

Type of arrangement	Date of beginning	Date of ending
Stand-by arrangement	14.10. 1994.	13.4.1996.
Systemic Transformation Facility	14.10.1994.	27.12.2002.
Extended Fund Facility	12.3.1997.	11.3.2000.
Stand-by arrangement	19.3.2001.	18.5.2002.
Stand-by arrangement	3.2.2003.	2.4.2004.
Stand-by arrangement	4.8.2004.	15.11.2006.

Source: International Monetary Fund, http://www.imf.org/external/np/fin/tad/exfin2.aspx?memberkey1=227&date1Key=1996-05-31, complemented with Ministry of Finance Republic of Croatia, http://www.mfin.hr/hr/mmf

For the analysis in the following chapter, it is important to note that the first three financial arrangements were used exclusively, while the last three Stand-by arrangements were approved, but the funds were not withdrawn. However, from the previous analysis, it is clear that by entering into a

contractual obligation with the IMF, the country is obliged to adopt a sustainable stabilization policy. Croatia as a transitional country used the IMF's financial loans for an easier transition to a market-oriented economy so it should be kept in mind that Croatia's deficit is partly justified. The next chapter will define a variable that identifies IMF in the model.

4. Empirical Model and Results

4.1 Method and Data

This section provides an overview of the methodological framework and defines the variables used. It investigates whether the IMF loans affect the lower budget spending in the pre-election period. The research in Croatia was conducted by Vučković (2010) which proves the existence of the political fiscal cycles in budget spending. Following this research, this paper will try to find out whether the average spending is lower in the electoral period when the country is under a contractual obligation with the IMF.

A regression model was developed for the purpose of empirical proofing, which is based on least square method. The same methodology can be found when testing the influence of the political cycles on fiscal (and/or monetary) variables when their impact in a particular country is tested (Ryou, 2014; Vučković, 2010; Van Dalen & Swank, 1996; Magloire; 1997). The basic equation from which it comes is stated as follows:

$$Y_t = \alpha_t + \sum_{i=1}^{5} \beta_i * CONTROL_t + \gamma * EY(n) + \delta * IMF + \varphi * EY(n) * IMF + \varepsilon_t \quad (1)$$

Where the symbol:

Y represents the dependent variable, i.e., the government spending (EX)

$CONTROL$ represents the control variables in the model (dependent variable with a lag, GDP growth, unemployment rate, GDP pc, crisis)

$EY(n)$ dummy identifies the election periods

IMF dummy identifies the presence of a contractual obligation with the IMF

ε_t represents a standard error

According to the similar researches of political fiscal cycles, the basic control variables in the model are the dependent variable with the time lag (EX_L), GDP growth (EG); unemployment rate (UN); GDP per capita (PC).

The introduction of a dependent variable with a time lag results in the dynamics of government spending. Since it can be expected that the future level of spending will inherit the previous level of spending, the model introduces a dependent variable with a time lag. The data for this variable are taken from the Croatian National Bank database.

The GDP growth (EG) variable is included in the model as the revenue control effect. For example, when an economic growth is registered according to the theoretical assumptions, there is connected to improve the fiscal position, and the fiscal consolidation as well. In addition, the connection between the economic growth and the fiscal deficit (and spending) is acting on a standard the voters. For example,

if an increased economic growth is recorded, the voters do not perceive the fiscal costs involved. In any case, the decline in the GDP is causing increased government investment and/or guarantees that may cause fiscal social restraint. The data for this variable are taken from the Croatian Bureau of Statistic database and from Mikulić and Lovrinčević (2000).

The unemployment rate (UN) variable is included in the model for its influence on the dependent variable. As spending, and hence the deficit are influenced by certain costs arising from the unemployment, such as increasing current expenditures, social transfers, employment subsidies, but also in the pre-election period by financial stimulation of unemployment voters, this variable in the model represents a control variable that wants to isolate the bias of the obtained research results. The data for this variable is downloaded from the Eurostat database.

GDP per capita (PC) variable expresses the standard of the voters and serves as an approximate of economic development.

The variables crisis identifies the global economic crisis that started in 2009, and is included in the model as a control variable for its impact on the public finance system. The variable is written as follows:

$$CRISIS = \begin{Bmatrix} 1\ for\ time\ between\ 2009{:}\ Q1 - 2012{:}\ Q4 \\ 0\ others \end{Bmatrix}$$

The political dummy EY(n) variable identifies the election periods. This variable tests the political fiscal cycles in Croatia. The cycles are tested in the pre-election, electoral and postelection quarter. It is written in the following form:

$$EY(n) = \begin{Bmatrix} 1\ for\ pre - election; election; postelection\ quarter \\ 0\ others \end{Bmatrix}$$

$$\{n = -1; 0; 1\}$$

The variable indicating the presence of a financial arrangement is marked as a dummy variable and estimates the impact of the IMF on government spending. Table 2 shows the start and end times of a contractual obligation with the IMF, and the specified IMF variable will contain 1 throughout the agreed repayment term of the assumed commitment. The reason for this is that the contractual obligation of the country is faced with the implementation of sustainable macroeconomic stabilization, which presupposes the neutralization of pre-election government spending or its lower magnitude, which has no such influence on the deviation of government spending. It is written in the following form:

$$IMF = \begin{Bmatrix} 1\ for\ period\ of\ IMF\ arrangement \\ 0\ others \end{Bmatrix}$$

Interaction variable $EY(n) * IMF$ tests the set theory of the Fund's impact on the reduction of pre-election spending. The influence of the Fund focuses on the testing of electoral fiscal effects only when the contractual obligation is present.

4.2 Empirical Results

Econometric analysis begins with Unseasoning of all variables; conducting an unit root test for Stationarity variables; Heteroskedasticity; existence of second-order residual auto-correlation; and with checkup of normality of distribution.

Unseasoning was performed by TRAMO/SEATS method; Stationary testing was performed by the Augmented Dickey-Fuller test; Heteroskedasticity with the White test; second-order residual autocorrelation with the Breusch Godfrey LM test; while the normality of the distribution was confirmed with the Jarque-Bera test. Results of the Augmented Dickey-Fuller test and Jarque-Bera test are provided in the appendings at the end of the paper. Results of the Breusch-Godfrey LM test and White test are in Table 3. The results of the initially estimated model confirm the existence of the second-order residual autocorrelation, therefore, the Newey-West correction was used for the correction of errors, after which the robust error estimates were obtained. The following regression equation is estimated after the performed tests:

$$\Delta ln\ EX = \alpha_1 + \beta_1 \Delta ln\ EX\_L + \beta_2 \Delta \ln EG + \beta_3 ln\ UN + \beta_4 \Delta ln\ PC + \beta_5 CRISIS + \gamma_1 EY(n) + \delta_1 IMF + \varphi_1 EY(n) * IMF + \varepsilon_t \quad (2)$$

The research is conducted over a period from 1995:Q1 to 2015:Q4. The results of the econometric research that are shown in Table 3 point to a conclusion that IMF has a limiting role in raising spending in the pre-election period.

Table 3. Results of Testing

	Model 1	**Model 2**	**Model 3**
Δ $ln\ L\_EX$	-0,39	-0,37	-0,37
	(,06)***	(,06)***	(,04)***
Δ $ln\ EG$	0,20	0,20	0,21
	(,81)	(,84)	(,74)
Δ $ln\ PC$	-0,74	-0,66	-0,40
	(,83)	(,84)	(,76)
$ln\ UN$	-0,04	-0,05	-0,06
	(,01)***	(,01)***	(,01)***
$CRISIS$	-0,03	-0,03	-0,04
	(,01)***	(0,01)**	(,01)***
$EY(-1)$	0,01		
	(,01)		
$EY(0)$		**0,02**	
		(,01)*	
$EY(1)$			**-0,06**

			(,02)* **
IMF	0,01	0,02	0,01
	(,01)	(,01)	(,01)
$EY(n) * IMF$	0,07	**-0,06**	0,05
	(,05)	**(,03)** **	(,04)
$cons$	0,15	0,15	0,19
	(,04)***	(,05)***	(,04)***
R^2	0,28	0,25	0,26
DW	2,34	2,35	2,36
Breusch-Godfrey LM test (p value)	0,002	0,005	0,002
White test (p value)	0,83	0,62	0,36
Number of observation	82	82	82

Note. *** p<0,01; ** p<0,05; * p<0,1; in parentheses are robust standard errors (Newey-West method); all variable are in logarithmic form; all calculations are made with the help of EViews 7 software.
Source: Author.

The results of the Model 1, which estimates the changes in government spending in pre-election quarter, suggest that there are no significant changes in the quarter and the deviation of government spending.
Model 2 is used to estimate the changes in government spending in the election quarter. Namely, this quarter saw an increase in government spending, the EY(0) coefficient is significant and positive, and points to increased public allocations in the election quarter, confirming theoretical views. But when the coefficient obtained with the interaction variable that tests changes in the election quarter is observed, when the contractual obligation with the IMF is also present, the coefficient is negative and significant. The obtained results point to the fact that the government spending in the electoral period decreases when the IMF is present, which is also in line with the theoretical representation.
The results of the postelection quarter tests, the Model 3, also confirm the theoretical views on the restrictive postelection fiscal policy. In the quarter after the election, the coefficient with the observed variable is negative and significant and indicates a decrease in government spending after the political elections.
Several conclusions can be drawn in line with the results of the testing:
(i) Pre-election period is characterized by an expansive fiscal policy which, according to theoretical considerations, influences the signaling of political competence; helps achieving re-election; indirectly influences increase of voter's standard on the short-term basis;
(ii) Postelection period is marked by restrictive fiscal policy or reduction of government spending that is necessary as the fiscal expansion is triggered for purely political opportunities; for balancing of the budget; reduction of inflationary pressures;

(iii) When a contractual arrangement with the IMF is present, the election period is characterized by a fiscal contraction of government spending, thus not detecting political fiscal cycles. Similar findings can be found in Hyde, O'Mahony (2010) and Ebeke and Ölcer (2013).

5. Conclusion

This paper is primarily focused on testing one of the determinants of reducing government spending in the pre-election period. Due to external pressures to improve the system of public finances and macroeconomic stability under the contractual obligation with the IMF, the countries receiving financial loans adopt a conditionality system that strives for fiscal consolidation. The condition-based system is governed by the financial environment that the country needs to provide in order to access the entire amount of the approved loan. The condition policy seeks to secure a sustainable macroeconomic policy that, along with fiscal policy constraints, also contains constraints for political representatives to use fiscal policy for pre-election purposes. However, a somewhat different view suggests that the approval of IMF loans directly encourages the country to fiscal expansion by allocating financial lending before the election.

There are numerous examples of countries that are pursuing policy goals by adopting expansive fiscal policy while after the end date of political elections they adopt a more restrictive fiscal policy. There are also examples of testing various determinants of political fiscal cycles, such as fiscal rules, fiscal transparency, new democracy effect, informing voters or the influence of the IMF program.

The results of the previous research regarding the connection of the IMF programs with the political fiscal cycles do not provide an unambiguous answer. According to one, in the pre-election period, the IMF credit increases, encouraging pre-election expansion, according to others, the pre-election fiscal restriction stem from the conditionality system. According to the above contradictory standpoints, Vaubel's statement (1991) "IMF lending facilitates the expansion. IMF conditionality facilitates the contraction. In this way, the IMF tends to contribute to the generation of political fiscal cycles".

According to the results of this research, Croatia shows a pre-election increase in government spending and postelection reduction of spending. However, when a contractual arrangement with the IMF is present, pre-election time marks a decline in government spending. In accordance with the theoretical views, this example shows a positive influence on government spending and a balance of public finances in pre-election time. In this case, the IMF programs limit the emergence of political fiscal cycles.

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Appendix

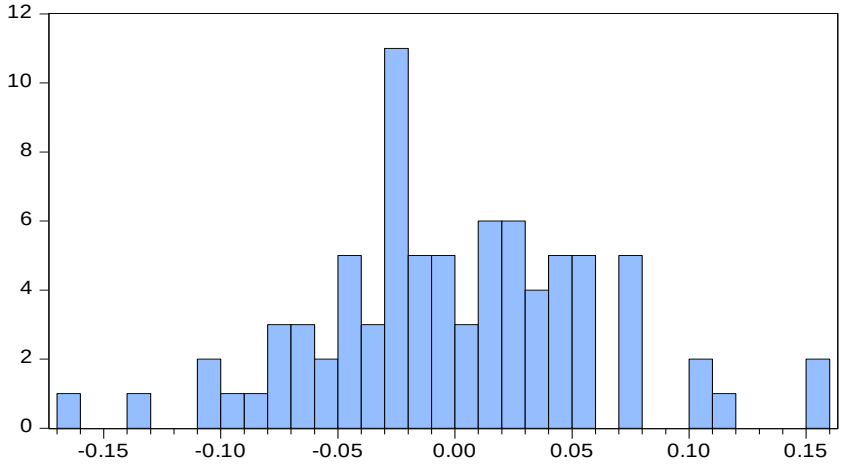
Results of ADF test for time series

Variable	**Constant**	**Trend and constant**	**No trend and constant**
EX	-1,33	-1,81	3,25
Δ EX	-11,91***	-11,96	-2,99***
EG	-1,98	-0,18	1,82
Δ EG	-6,38***	-6,81***	-3,42***
UN	-3,30**	-3,36*	-0,31
PC	-1,92	0,07	1,97
Δ PC	-4,55***	-7,53***	-1,18

Note. It is used Akaike info criterion; in table are value of t statistics; assumption of nonstationarity can be rejected with significant of *** 1%, ** 5%, * 10%.

Source: Author.

Results of Jarque-Bera test



Series: Residuals	
Sample 1995Q3 2015Q4	
Observations 82	
Mean	-1.58e-17
Median	-0.001627
Maximum	0.154878
Minimum	-0.164655
Std. Dev.	0.059408
Skewness	0.089697
Kurtosis	3.375653
Jarque-Bera	0.592099
Probability	0.743751

Source: Author.