DISCUSSION PAPER

1999a Rio de Janeiro, September 2014

EXECUTIVE SUMMARY

POLITICAL ELECTORAL CYCLES AND PUBLIC INVESTMENTS IN BRAZIL

Rodrigo Octávio Orair
Researcher at the Directorate of Macroeconomic Studies and Policies (Dimac) of the Ipea.
E-mail: <rodrigo.orair@ipea.gov.br>

Raphael Gouvêa
Researcher at the Dimac of the Ipea.
E-mail: <raphael.gouvea@ipea.gov.br>

Ésio Leal
Research Assistant of the Ipea.
E-mail: <esio.leal@ipea.gov.br>

The political business cycle literature constitutes one of the most exciting research agenda in economics nowadays. It has received contributions from authors working with different approaches, from the seminal Kalecki's (1943) heterodox perspective to models of opportunistic cycles and adaptive expectations (Nordhaus, 1975), as well as its rational expectations formulation (Rogoff; Sibert, 1988; Rogoff, 1990). The unifying feature of these different approaches is the aim of understanding the connections between economics and politics and, therefore, taking into consideration political factors as an additional explanation to economic fluctuation. Following Frey and Benz (2002), it is possible to group this literature into two main building blocks: ideological and political cycle models.

In this paper we contribute to the latter block, which is focused in studying the presence of political cycles in economic policy variables and its impacts on macroeconomic aggregates. Previous studies are usually focused on investigating the presence of cyclical components in public expenditure data. The general idea consists in discussing whether or not public expenditures accelerate before election and slow down afterwards, showing, therefore, temporal trajectories that coincide with electoral periods. But there are also studies that rely on other variables of fiscal, monetary and foreign exchange policy. Among fiscal policy variables, public investment is one of the most important when analyzing the political cycles given that this type of expenditure is generally more visible to voters and has larger multiplier effects on aggregate demand and employment. Furthermore, public investments have an intrinsically discretionary nature which makes them more sensitive to politicians' decision. Once identified the presence of political electoral cycles, a second direction of research focuses on studying its impacts on macroeconomic variables in terms of fiscal and monetary instabilities (public debt, inflation etc.) as well as in the behavior and fluctuation of other variables (unemployment, product growth, income distribution etc.).

The contribution of this paper consists in investigating the presence of political electoral cycles in gross fixed capital formation of Brazilian general government using time series econometric methods in a state-space framework. In state-space models it is possible to decompose time series in several structural components, including the cyclical one, which captures regular movements whose frequency can be endogenously estimated. The inclusion of cyclical components in state-space models is common in the business cycle literature, but, as shown by Orair and Silva (2012), it can be easily adapted to electoral cycles. These authors use the state-space framework to analyze series of monthly investments by Brazilian state and local governments over 2002-2010 and find evidence of political electoral cycles.

This paper, meanwhile being an extension of Orair and Silva (2012) as it updates their analysis to 2011, presents innovative contributions by investigating the presence of political cycles in the series of monthly investments by the central government and its capital transfers that finance investments by local and state governments. This is an important extension as it provides a wider picture of the Brazilian general government and its relationships between government levels, which is characterized by high decentralization of investments and a complex intergovernmental transfer system. To give an idea of the numbers involved, Brazilian general government investments in 2010 reached R$ 104.9 billion (approximately US$ 59.1 billion), being R$ 30.7 billion from the central government, R$ 40.1 billion (US$ 17.5 billion) from state government and R$ 34.1 (US$ 22.9 billion) from local government. In the same year, central government transfers for investments were of R$ 15.4 billion (US$ 8.8 billion) that are almost fully given to local and state governments and finance about 20% of their investments (19% and 21% in state and local levels, respectively).[1]

Therefore, the aim of this paper is to test the hypothesis of political electoral cycles in aggregate time series data of the Brazilian general government investments – central, state and local governments – and central government capital transfers. The methodology employed is quite simple: it consists in adjusting univariate structural time series model for each series and then evaluating if the estimates of frequency and temporal trajectory of cyclical components are compatible with the political electoral cycles hypothesis.

The main contributions to the existing literature are worth of mention. First, concerning the empirical strategy, our approach lies in the use of state-space framework which allows to decompose time series into their structural components and, thus, isolate the cyclical component from the influence of the other components (trend, seasonality, irregular etc.). In fact, estimating the cycles in this way – which has not been fully explored so far in the literature – permits a better identification of the cycles turning points and, at the same time, it allows an analysis of the qualitative differences between government levels.[2] This is a considerable improvement in relation to the dominant approach of testing the presence of cycles by estimating time series regressions with electoral dummies. Second, by extending the analysis of public investments to all government levels and central transfers, we are able to obtain a wider picture of the general government. Therefore, while previous studies in Brazil usually are restricted to specific government levels, we explicitly incorporate the commonly neglected relations between central government and subnational governments. Being based on aggregate time series, however, makes it impossible to analyze individual effects in each government unity, this consists of the paper's greater weakness.

1. State and local governments account for 96% of the total amount of capital transfers (R$ 7,5 billion and R$ 7,3 billion, respectively).

2. As far as we know, Orair and Silva (2012) is the only paper that uses the state-space framework to analyze the existence of political electoral cycles, meanwhile Bond, Fleisher and Wood (2003) use it to discuss cycles in ideological models.

REFERENCES

BOND, J. R.; FLEISHER, R.; WOOD, B. D. The marginal and time-varying effect of public approval on presidential success in Congress. **Journal of politics**, v. 65, n. 1, p. 92-110, 2003.

FREY, B.; BENZ, M. Business cycles: political business cycle approach. In: SNOWDON, B.; VANE, H. **An encyclopedia of macroeconomics**. Cheltenham; Northampton: Edward Elgar, 2002. p. 90-92.

KALECKI, M. Political aspects of full employment. **The political quarterly**, v. 14, p. 322-331, Oct./Dec. 1943.

NORDHAUS, W. The political business cycle. **The review of economic studies**, v. 42, n. 2, p. 169-190, 1975.

ORAIR, R. O.; SILVA, W. J. **Investimentos dos governos subnacionais no Brasil**: estimação e análise por modelos de espaço de estado. Brasília: Ipea, 2012. (Texto para Discussão, n. 1.771).

ROGOFF, K. Equilibrium political budget cycles. **The American economic review**, v. 80, n. 1, p. 21-36, 1990.

ROGOFF, K.; SIBERT, A. Elections and macroeconomic policy cycles. **Review of economic studies**, v. 55, p. 1-16, 1988.

EXECUTIVE SUMMARY