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THE GOVERNMENT SPENDING ON AGRIBUSINESS SECTOR MODEL

Vesna D. Jablanović[1]

Summary

This paper studies relation between government spending on agribusiness sector and the political business cycles. Governments try to improve their reelection prospects with the help of expansionary fiscal policies. Rising fiscal deficits before elections are followed by fiscal consolidation afterwards. Namely, this paper examines the relation between elections and government spending on agribusiness sector.

It is supposed that government expenditure has been grouped into two categories: social protection and "economic affairs". Further, it is supposed that the category 'economic affairs' covers support programmes, subsidies and public infrastructure spending in the agribusiness sector.

Therefore, the structure of government expenditure is summarized by a downward-sloping curve, yielding a trade-off between government spending on social protection (as a short-run goal before election) and government spending on "agribusiness affairs" (as a long-run goal afterward).

An opportunistic incumbent policy-maker has no preferences over government spending on social protection and government spending on "agribusiness affairs" per se and cares only about re-election.

Government spending much more on social protection versus "agribusiness affairs" increases before elections.

The basic aim of this paper is to set the model which describes the cyclical movement of the government spending on agribusiness sector. This model explains why government intervention causes cyclical movement of the government spending on agribusiness sector. The main source of conflict occurs between the short-run and long-run government goals.

Key words: ***Agriculture, Government expenditure, Fiscal policy***

JEL classification: *Q10 , H50, H30*

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1. Introduction

Incumbent governments try to manipulate fiscal and monetary policy instruments so as to get reelected and stay in office. Voters are assumed to maximise their individual utilities, and the incumbent is assumed to implement those policies that allow her to retain power, to acquire the maximum number of votes or to get re-elected. This economic policy stimulus in turn causes the economy to fluctuate around its long-run path.

The political business cycles (PBC) models studies how interest groups and political pressures within an economy influence its macroeconomic performance. Political business cycles are cycles in macroeconomic variables generated by the electoral cycle. Political cycles in fiscal policy variables are known as 'political budget cycles'. There are two basic types of the PBC models:

(a) Opportunistic models try to show that the incumbent government manipulates the economy using fiscal or monetary instruments just before the election period to maintain power. It is assumed that the policymakers maximize only their pobability of re-election.

Two main lines of research have characterised these models: (i) the traditional (non-rational expectations) framework, and (ii) the rational expectations approach.

Nordhaus (1975) created formal model of the opportunistic political business cycle (PBC). He identifies a cycle in the 'opportunistic' behaviour of politicians interested only in their re-appointment: the incumbent stimulates the economy before the election period so as to get re-elected. The model is based upon the existence of a stable Phillips curve in which growth (and unemployment) depend upon unexpected inflation. Nordhaus derives the following conclusion: (i) the rate of inflation increases and rate of unemployment decreases around the election time as a consequence of the pre-electoral economic expansion; (ii) after each election one should observe low growth and high unemployment. As Nordhaus stressed, political business cycles (PBC) - like phenomena appear in all areas where short-run and long-run trade-offs differ. For example, the privatization has so far been associated with a decline in output an employment only in the short run. Furthemore, Jablanovic (1998, 1999) shows that the privatization can be a generator of the opportunistic and rational political business cycle.

These non-rational-expectations analytical frameworks were further developed during the mid-eighties to incorporate rational expectations and the game-theoretical approach to the positive theory of macroeconomic policy. The works by Kydland and Prescott (1977), Baro and Gordon (1983), Cukierman & Meltzer (1986), Rogoff (1990), and Persson & Tabellini (2000, 2002, 2003) include rational expectations into the 'opportunistic' framework. They developed rational 'opportunistic' models.

(b) 'Partisan' political business cycles represent fluctuations in macroeconomic variables over or between electoral cycles resulting from leaders having different policy objectives. Hibbs (1977, 1994) presented a model of partisan policymakers. Different parties maximize different objective function. Namely, different parties, when in office, implement different policies: the left-wing party attributes a higher cost to unemployment, and the right-wing party fights inflation.

Alesina (1988) builds a rational expectations model using a 'partisan' framework. He argues that differences in growth and unemployment associated to changes of government (left wing parties or right wing parties) are only temporary. Alesina and Roubini (1992) test Nordhaus' model on growth and unemployment . They consider the OECD countries in the period 1960 – 1987. They state that there is strong evidence to support the rational partisan model . Alesina and Sachs (1988) test the model on post-Second World War United States data. They state that the growth rate of the GNP in the first half of Democratic administrations tends to be higher than in the second half, and vice versa for Republican administrations.

There is evidence of electoral cycles for efects on the budget in several countries: US (Peltzman, 1992), Colombia (Drazen and Eslava 2005), China (Yinin (Leo) Li, 2011)

The basic aim of this paper is to show that if voting is based on economic performance in the recent past and if expectations of government spending on social protection were backward-looking, an opportunistic incumbent would find it optimal to generate a cycle corresponding to his term in office with an economic stimulus before elections and a recession afterwards. The analysis of the relation between government spending on social protection and government spending on "agribusiness affairs" (support programmes, subsidies and public infrastructure spending in the agribusiness sector) surges from the conventional macroeconomic wisdom that there is a short-run trade-off between them, and the supporting evidence that voters are sensitive to both government spending on social protection and government spending on "agribusiness affairs" in their electoral choice. In this sense , it is important to set up the model of the opportunistic political business cycle (PBC) , extended to include fiscal policy.

It is supposed that government expenditure has been grouped into two categories: social protection and "agribusiness affairs". Further, it is supposed that the category 'agribusiness affairs' covers support programmes, subsidies and public infrastructure spending in the agribusiness sector.

Therefore, the structure of government expenditure is summarized by a downward-sloping curve, yielding a trade-off between government spending on social protection (as a short-run goal before election) and government spending on "agribusiness affairs" (as a long-run goal afterward).

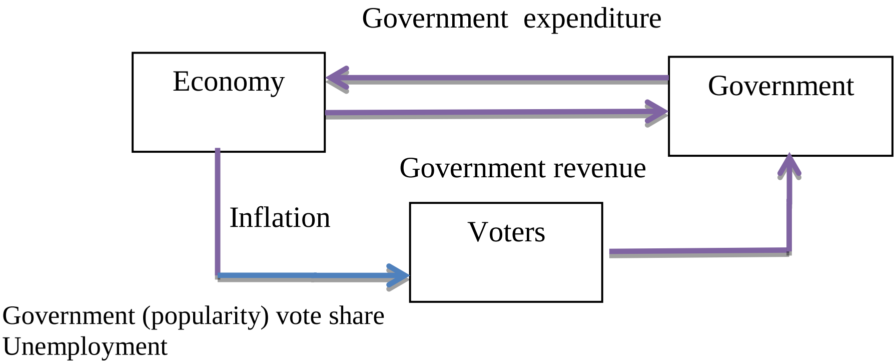

Figure 1 Interactions between the economy and the polity in a politico-economic model

It is supposed that an opportunistic incumbent policy-maker has no preferences over government spending on social protection and government spending on "agribusiness affairs" per se and cares only about re-election.

The basic aim of this paper is to set the model which describes the cyclical movement of the government spending on agribusiness sector . This model explains why government intervention causes cyclical movement of the government spending on agribusiness sector. The main source of conflict occurs between the short-run and long-run opportunistic government goals.

2. The model

The assumption underlying the opportunistic political business cycle model can be characterized as follows:

A.1. It is supposed that government expenditure has been grouped into two categories: social protection and " agribusiness affairs".

A.2. The change of government spending on "agribusiness affairs" (Δa) is described by

$$\Delta a = -\alpha \left(s_t - E_{t-1} s_t\right) \tag{1}$$

where a - government spending on "agribusiness affairs" (support programmes, subsidies and public infrastructure spending in the agribusiness sector); s - government spending on social protection ; E – an expectations operator ; α-parameter.

A.3. Adaptive expectations of government spending on social protection

$$E_{t-1}\, s_t = s_{t-1} \tag{2}$$

mean that expected government spending on social protection is determined by past values of government spending on social protection.

A.4. Government spending on social protection is directly controlled by the policymakers.

A.5. Voters are "retrospective". They judge the incumbent's performance based upon the state of the government spending during the incumbent's term of office. Voters are myopic, they heavily discount the future. Voters are myopic in the sense that they consider the economy's present performance and that is why they heavily discount the future.

$$v_t = -\frac{s_t}{2} + \beta\, \Delta\, a \tag{3}$$

where v – voter's period utility stream; β - parameter.

A.6. It is supposed that politicians are "opportunistic"; they only care about holding office. Politicians are identical and they prefer to stay in office. Party affiliations are ignored.

$$V_t = v_t + \pi\, v_{t-1} \quad 0 < \pi < 1. \tag{4}$$

where V – the government vote share;

A.7. The policy-maker controls a fiscal policy instruments. Government intervention can affect the economy. Fiscal policy under the discretionary control of elected leaders can be used to affect agribusiness-cycle activity. Government leaders can stimulate the economy by reducing government spending on social protection and increasing expenditures on 'agribusiness affairs'. They can also constrict the economy with opposite changes in these fiscal policy tools.

A.8. The timing of elections is exogenously fixed.

Substituting (1), (2), (3), into (4) yields

$$V_t = -\frac{s_t^{\,2}}{2} - \alpha\,\beta\, s_t + \alpha\,\beta\, s_{t-1} - \frac{\pi\, s_{t-1}^{\,2}}{2} - \alpha\,\beta\,\pi\, s_{t-1} + \alpha\,\beta\,\pi\, s_{t-2} \tag{5}$$

The government maximizes its vote share at elections. There are election periods (E) and non-election periods (N). Let t= E in (5) and, hence, t-1 = N and t-2 = E. Then,

$$V_E = -\frac{s_E^{\ 2}}{2} - \alpha\,\beta\, s_E + \alpha\,\beta\, s_N - \frac{\pi\, s_N^{\ 2}}{2} - \alpha\,\beta\,\pi\, s_N + \alpha\,\beta\,\pi\, s_E \tag{6}$$

Which the degree of the government spending on social protection during election and non-election periods maximize votes is determined by the first-order conditions

$$\frac{\partial V_E}{\partial s_E} = -s_E - \alpha\,\beta + \alpha\,\beta\,\pi = 0 \tag{7}$$

and

$$\frac{\partial V_E}{\partial s_N} = -\pi\, s_N + \alpha\,\beta - \alpha\,\beta\,\pi = 0 \tag{8}$$

The resulting policy cycle is characterized by

$$s_E = \alpha\,\beta\,(\pi - 1) > 0 \text{ and } s_N = -\frac{\alpha\,\beta\,(\pi - 1)}{\pi} < 0 \tag{9}$$

during election periods and non-election periods, respectively. The resulting level of the government spending on “agribusiness affairs” (support programmes, subsidies and public infrastructure spending in the agribusiness sector) are

$$\Delta\, a_E = -\,\alpha^2\,\beta\left(\frac{\pi^2 - 1}{\pi}\right) < 0 \tag{10}$$

and

$$\Delta\, a_N = \alpha^2\,\beta\left(\frac{\pi^2 - 1}{\pi}\right) > 0 \tag{11}$$

Governments maximize reelection prospects by deliberately generated (unexpected) degree of the government spending on social protection during election periods, thus decreasing the level of the government spending on “agribusiness affairs” (support programmes, subsidies and public infrastructure spending in the agribusiness sector). By contrast, the degree of the government spending on social protection is reduced during non-election periods, increasing the level of the government spending on “agribusiness affairs”. However, development of the agribusiness sector requires long-term approach.

3. Conclusion

The political – business cycles are the business cycles which are caused by elected government leaders who manipulate the economy to achieve personal political goals, that is, to be re-elected and remain in office. The leaders increase government spending on social protection and decrease government spending on "agribusiness affairs" during election periods to ensure re-election. Then, thez decrease government spending on social protection and increase government spending on "agribusiness affairs" during non-election periods to correct problem.

Under these assumptions (A.1.-A.8.), it is possible to derive the following implications: (i) every government follows the same policy; (ii) the government spending on social protection increases around the election time because the policymakers have incentive to retain power; (iii) after the election, the government spending on social protection is reduced , but the government spending on "agribusiness affairs" (support programmes, subsidies and public infrastructure spending in the agribusiness sector) increases. However, the government spending on "agribusiness affairs" requires long-term approach.

An important consequence of this political business cycles model is that the elected politicians who run government is the primary cause of economic instability. This further implies that the way to correct fiscal policy and economic instability is to limit or prevent government leaders from discretionary control over fiscal policy.

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