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ELECTIONS, FISCAL POLICY AND GROWTH: REVISITING THE MECHANISM

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Abstract

This short paper reconsiders the popular result that the lower the probability of getting reelected, the stronger the incumbent politicians' incentive to follow short-sighted, inefficient policies. The set-up is a general equilibrium model of endogenous growth and optimal fiscal policy, in which two political parties can alternate in power. We show that re-election uncertainty is not enough to produce the popular result. Specifically, re-election uncertainty must be combined with the hypothesis that politicians care about economic outcomes more when in power than when out of power, and - more importantly - that this preference over being in power is *ad hoc*. That is, if politicians can also choose how much to care about economic outcomes when in and out of power, it is optimal to care the same and hence shortsighted policies do not arise. Therefore, such policies presuppose a degree of irrationality on the part of political parties.

JEL Classification: D9, E6, H1, H5.

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I. INTRODUCTION

Policymakers are chosen for a finite term and know they will be replaced in the future by another policymakers. This affects their behavior in several ways.[1] One way is that uncertainty about remaining in office induces policymakers to choose relatively short-sighted policies and this is bad for macroeconomic performance [see e.g. Alesina and Tabellini (1990), Lockwood et al. (1996), Devereux and Wen (1998) and Persson and Tabellini (1999)]. The lower the probability of getting reelected, the stronger the incumbent's incentive to follow short-sighted, inefficient policies. Here, inefficiency takes the form of too big governments and changes in spending patterns in favor of non-productive government expenditures (e.g. public consumption, transfers and subsidies).[2]

This short paper reconsiders the underlying mechanism and shows that re-election uncertainty is not enough to produce these realistic results. Specifically, re-election uncertainty must be combined with the hypothesis that political parties care about economic outcomes more when in power than when out of power, and - more importantly - that this preference over being in power is *ad hoc* (i.e. exogenously set). If politicians can also choose how much to care about economic outcomes when in and out of power, it is optimal to care the same, so that inefficient policies do not arise (at least in the context used by the literature). In other words, in addition to electoral uncertainty, we also have to assume a degree of irrationality or fiscal illusion on the part of political parties. By contrast, the existing literature (implicitly or explicitly) states that a bias towards short-sighted policies can arise even if policymakers act rationally, and their time horizon and discount factor coincide with those of the society.

The model is as follows. We use a general equilibrium model of endogenous growth and optimal fiscal policy, where the incumbent government imposes income taxes to finance public consumption services (that provide direct utility to households) and public production services (that provide Barro-type production externalities to

[1] See Drazen (2000, chapter 7) for a review of the main (positive and negative) macroeconomic effects of elections. For the "New Political Economy", see the recent books by Persson and Tabellini (2000) and Drazen (2000).

[2] Tanzi and Schuknecht (2000) provide empirical evidence. Mueller (1989, chapter 17) and Alesina (1999) discuss a number of political economy arguments that can explain the data (e.g. short-sighted policies, politically influential lobbies, bureaucracy, etc). Here we focus on short-sighted policies. Note that these arguments can explain *systematic*, long-term changes in the size and role of government, not only (electoral or partisan) *cycles* in economic policy.

private firms). Two political parties can alternate in power as a result of elections. The elected party forms a government that sets economic policy during term in office. The parties have the same objective and are benevolent. However, we allow them (if they wish) to care differently about economic outcomes[3] when in and out of power. The parties play Nash vis-à-vis each other. We solve for Markov strategies that are time consistent. Thus, the Political General Equilibrium (PGE) is Markov perfect. This is a fully dynamic and rather generalized model.

We first solve for a PGE in which the incumbent party chooses only the tax rate and the allocation of tax revenues between productive and non-productive services during term in office. This is for any weights given to economic outcomes in and out of power. Then, we can get the standard result of the literature (i.e. as the probability of getting reelected decreases, policymakers choose short-sighted policies, here in the form of high total expenditure-to-output ratio and low share of tax revenues used to finance production services), only if we assume that the parties care about economic outcomes more when in than when out of power. If it so happens and they care the same, economic policies are independent of reelection probabilities and so we get the second-best solution without effects from political uncertainty.[4]

We then ask the natural question, "What is the optimal choice of the weights given to economic outcomes in and out of power?" In our two-state dynamic programming problem solved by political parties, this can be easily determined by the appropriate smooth pasting conditions. These conditions imply that it is optimal for the political parties to care about economic outcomes equally whether in or out of power. Therefore, short-sighted policies are not consistent with rational behavior.

Our results get support from the political science literature [see e.g. Laver and Hunt (1992)], which provides evidence for fiscal illusion or myopia on the part of political parties. They are also similar to the results of the early literature on political economy, according to which politicians do act in ways that imply that either themselves suffer from fiscal illusion, or that they believe voters are myopic, or both [see e.g. Mueller (1989, chapters 14 and 17)].

[3] In particular, about private consumption and public consumption services, which are the economic outcomes included in households' utility function.

[4] Here, the two political parties have the same objective. By contrast, in Alesina and Tabellini (1990) and Devereux and Wen (1998), the parties have different objectives (they care about different public goods or care differently about the same public goods); this effectively means that they are assumed to care differently about policy outcomes in and out of power. Lockwood et al. (1996) make this assumption explicitly.

The rest of the paper is as follows. Section II solves for a competitive equilibrium. Section III solves for optimal fiscal policies. Section IV concludes.

II. THE ECONOMY AND COMPETITIVE EQUILIBRIUM

Consider a closed economy with a private sector and two political parties. The private sector consists of a representative household and a representative firm. The household consumes, works and saves in the form of capital. The firm uses capital and labor to produce a single good. The elected party forms a government, which finances the provision of public services by taxing the household's income. We assume discrete time and infinite time-horizons for both private agents and politicians. This section solves for a competitive equilibrium, given economic policy and the electoral process.

Households

The representative household maximizes intertemporal utility:

$$\sum_{t=0}^{\infty} b^t u(c_t, h_t) \tag{1a}$$

where c_t and h_t are respectively private consumption and public consumption at time t, and the parameter $0 < b < 1$ is the discount rate. The instantaneous utility function $u(.)$ is increasing and concave, and also satisfies the Inada conditions. For algebraic simplicity, we assume that $u(.)$ is additively separable and logarithmic.

$$u(c_t, h_t) = \log c_t + d \log h_t \tag{1b}$$

where the parameter $d \geq 0$ is the weight given to public consumption services relative to private consumption.

At any period t, the household rents its predetermined capital, k_t, to the firm and receives $r_t k_t$, where r_t is the market return to capital at t. It also supplies

inelastically one unit of labor services so that the labor income is w_t. Further, it receives profits, p_t. Thus, the household's budget constraint at t is:

$$k_{t+1} + c_t = (1-q_t)(r_t k_t + w_t + p_t) \tag{2}$$

where $0 < q_t < 1$ is the income tax rate. For algebraic simplicity, we assume full capital depreciation. The initial capital stock, k_0, is given.

The household acts competitively by taking prices, tax policy and public services as given. We will solve this problem by dynamic programming. From the household's viewpoint, the state variables at time t are the predetermined capital stock, k_t, and current economic policy. As we show below, the independent policy instruments at t are the current tax rate, q_t, and the current share of total tax revenues used to finance public production services, b_t. Then, let $V(k_t; q_t, b_t)$ denote the value function of the household at t. This value function must satisfy the Bellman equation:

$$V(k_t; q_t, b_t) = \max_{c_t,\, k_{t+1}} [\log c_t + d \log h_t + bV(k_{t+1}; q_{t+1}, b_{t+1})] \tag{3}$$

Using (2) for c_t into (3), the first-order condition for k_{t+1} and the envelope condition for k_t are respectively:

$$\frac{1}{c_t} = bV_k(k_{t+1}; q_{t+1}, b_{t+1}) \tag{4a}$$

$$V_k(k_t; q_t, b_t) = \frac{(1-q_t)r_t}{c_t} \tag{4b}$$

Firms

Following the class of models introduced by Barro (1990), we assume that public services provide production externalities to private firms and technology at the firm's level takes a Cobb-Douglas form. Thus, the production function of the representative firm is:[5]

[5] Since there is one unit of labor, y_t and k_t are also per capita output and capital respectively.

$$y_t = Ag_t^{1-a} k_t^{a} \tag{5}$$

where g_t is public production services at t, and $A>0$ and $0 < a < 1$ are parameters.

The firm maximizes profits, p_t, given by:

$$p_t \equiv y_t - r_t k_t - w_t \tag{6}$$

The firm acts competitively by taking prices and public services as given. This is a simple static problem. The first-order conditions, that also imply zero profits, are:

$$r_t = aAg_t^{1-a} k_t^{a-1} \tag{7a}$$

$$w_t = (1-a)Ag_t^{1-a} k_t^{a} \tag{7b}$$

Government budget constraint

At each t, the government runs a balanced budget by taxing the household's income at a rate $0 < q_t < 1$.[6] Since $h_t + g_t$ is total expenditures, we have:

$$h_t + g_t = q_t(r_t k_t + w_t + p_t) \tag{8a}$$

Without loss of generality, we assume that a share $0 < b_t < 1$ of total tax revenues finances public production services, g_t, and the rest $0 < 1 - b_t < 1$ finances public consumption services, h_t. Thus, (8a) is decomposed into:

$$g_t = b_t q_t(r_t k_t + w_t + p_t) \tag{8b}$$

$$h_t = (1-b_t) q_t(r_t k_t + w_t + p_t) \tag{8c}$$

where (8a)-(8c) make clear that q_t and b_t fully summarize economic policy at any time t, given the state of the economy.

Competitive decentralized equilibrium (given economic policy)

Given $\{q_t, b_t\}_{t=0}^{\infty}$ and initial conditions, a Competitive Decentralized Equilibrium (CDE) is defined to be a sequence of allocations $\{k_{t+1}, c_t, h_t, g_t\}_{t=0}^{\infty}$ and prices $\{r_t, w_t\}_{t=0}^{\infty}$ such that: (i) households maximize utility and firms maximize profits, given prices and policy; (ii) all markets clear; (iii) all budget constraints are satisfied. This CDE is characterized by (1)-(8) above. The rest of this section will take advantage of the specific functional forms used to get a convenient closed-form analytic solution for this CDE.

In particular, we have:[7]

Result 1: *In a Competitive Decentralized Equilibrium (given any Markov economic policy), optimal private consumption and capital accumulation are:* [8]

$$c_t = (1-ab)A^{\frac{1}{a}}(1-q_t)(b_t q_t)^{\frac{1-a}{a}} k_t \tag{9a}$$

$$k_{t+1} = abA^{\frac{1}{a}}(1-q_t)(b_t q_t)^{\frac{1-a}{a}} k_t \tag{9b}$$

It is also useful for what follows to present the solution for the two types of public services, g_t and h_t, in a CDE. Using (5), (7a) and (7b) into (8b) and (8c), we get:

$$g_t = (Ab_t q_t)^{\frac{1}{a}} k_t \tag{9c}$$

$$h_t = (1-b_t) b_t^{\frac{1-a}{a}} A^{\frac{1}{a}} q_t^{\frac{1}{a}} k_t \tag{9d}$$

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[6] Thus, there is no public debt. This is for simplicity.

[7] We work as follows: In a CDE, the structure of the problem implies a conjecture of the value function in (3) of the form $V(k_t; q_t, b_t) = u_0 + u_1 \log k_t + u_2 q_t + u_3 \log q_t + u_4 \log b_t$, where u_0, u_1, u_2, u_3, u_4 are undetermined coefficients. Then, the optimality conditions (4a)-(4b) - together with (5), (6), (7a)-(7b) and (8b) - give (9b) and in turn (9a) via (2). Plugging (9a)-(9b) back into (3) and equating coefficients on both sides of the Bellman, we can solve for u_0, u_1, u_2, u_3, u_4. Note that while we can solve for u_1 at this stage, we cannot solve for u_0, u_2, u_3, u_4 before we also solve for optimal policy in the next section. This is how it should be in a general equilibrium model where policy is endogenously chosen. See also Kollintzas et al. (2000), Asteriou et al. (2000) and Malley et al. (2001).

[8] This closed-form solution follows from the structure of the model: log-linear utility functions, Cobb-Douglas production functions and full capital depreciation. For details, see Malley et al. (2001).

We sum up this section. Equations (9a), (9b), (9c) and (9d) give c_t, k_{t+1}, g_t and h_t respectively in a CDE. This is for any Markov fiscal policy, where the latter is summarized by the current tax rate, q_t, and the current allocation of tax revenues between public production and public consumption services, b_t. The next section will endogenize the choice of q_t and b_t. Note that the CDE is a function of the current state only (i.e. the predetermined capital stock, k_t, and the current policy instruments, q_t and b_t). This will make the political parties' optimization problem recursive and hence policies will be time consistent.[9]

III. FISCAL POLICY AND POLITICAL GENERAL EQUILIBRIUM

To endogenize economic policy, we form a Nash game between two political parties, denoted by i and j, which can alternate in power according to an exogenous reelection probability.[10] For simplicity, elections take place each time-period.[11] Thus, the party in power at time t has a probability $0 \leq q \leq 1$ of winning the next election and remaining in power in the next time-period $t+1$, and a probability $0 \leq 1-q \leq 1$ of losing the next election and remaining out of power at $t+1$. The elected party chooses the current policy instruments, q_t and b_t, to maximize the utility of the representative household.[12] In doing so, it plays Stackelberg *vis-a-vis* the private sector. It also plays Nash *vis-a-vis* the other political party, which may be in power in the future.

In particular, the Political General Equilibrium (PGE) is defined as follows: (i) Each time-period t, the elected party i chooses q_t and b_t to maximize (1a)-(1b) subject to the CDE, i.e. equations (9a)-(9d), and by taking as given the policy of the

[9] See also Kollintzas et al. (2000).

[10] Having endogenous reelection probabilities would not change our main results. For instance, assume that the reelection probability increases with current growth. This would give an incentive to the party in power to follow more long-sighted policies (so as to stimulate growth) than in the case in which the reelection probability is exogenous, but it would still be the case that, since the reelection probability is less than one, policies are less long-sighted than in the case without electoral uncertainty. In general, although there is feedback from policy and the state of the economy to reelection probabilities, the assumption that this probability is exogenous "means that there is some underlying exogenous stochastic process that makes the outcomes of elections uncertain" [see Drazen (2000, p. 256)].

[11] See also Alesina and Tabellini (1990) and Devereux and Wen (1998) for a similar electoral calendar. Lockwood et al. (1996) use a richer model in which the electoral cycle lasts two time-periods so that the elected party can remain in power for two periods. Our main results do not depend on this.

[12] Thus, economic policy is chosen by political parties whose objective function is that of the voters'.

other party, $j \neq i$, which may be in power at $t+1$. (ii) We solve for symmetric Nash equilibria. That is, policy strategies will be symmetric ex post.[13] (iii) We solve for Markov policy strategies. That is, q_t and b_t will be functions of the current value of the economy-wide state variables. Note that this also confirms the solution to the private agents' optimization problem in the previous section (see Result 1 above). (iv) The solution for q_t and b_t, in combination with the Competitive Decentralized Equilibrium above, will give a Markov-perfect PGE.[14]

Problem formulation

We will solve the problem by using dynamic programming. From the political parties' viewpoint, the state variable at any time t is the economy's inherited stock of capital, k_t. Let $V^{P_i}(k_t)$ and $V^{N_i}(k_t)$ be respectively the value functions of being in and out of power for party i at time t. Then, $V^{P_i}(k_t)$ and $V^{N_i}(k_t)$ must satisfy the following pair of simultaneous Bellman equations:[15]

$$V^{P_i}(k_t) = \max_{q_t, b_t} \left\{ g(\log c_t + d \log h_t) + bqV^{P_i}(k_{t+1}) + b(1-q)V^{N_i}(k_{t+1}) \right\} \quad (10a)$$

$$V^{N_i}(k_t) = (1-g)(\log c_t + d \log h_t) + b(1-q)V^{P_i}(k_{t+1}) + bqV^{N_i}(k_{t+1}) \quad (10b)$$

where c_t, k_{t+1} and h_t follow (9a), (9b) and (9d) respectively, and $0 < g \leq 1$ is the weight given to current economic outcomes when in power relative to out of power (see also below).

Inspection of the above problem reveals that we have to solve a dynamic programming problem with a log-linear payoff function and Cobb-Douglas constraints. Thus, the functional formulation of the policymakers' problem is similar to that of the private agents'. This means that the value functions in (10a)-(10b) are expected to be of the log-linear form $V^P(k_t) = u_0^P + u_1^P \log k_t$ and $V^N(k_t) = u_0^N + u_1^N \log k_t$, where $u_0^P, u_1^P, u_0^N, u_1^N$ are undetermined coefficients.

[13] Thus, we do not study partisan effects. This is because we want to focus on how electoral uncertainty affects the economy.
[14] This PGE is similar to that in Asteriou et al. (2000).
[15] See Alesina and Tabellini (1990) and Lockwood et al. (1996) for similar modeling.

Optimal fiscal policy and political general equilibrium

Using the above conjecture for the value functions into (10a)-(10b), differentiating the right-hand side of (10a) with respect to q_t and b_t, imposing the symmetricity conditions $q_t^i = q_t^j \equiv q_t$, $b_t^i = b_t^j \equiv b_t$, $u^{Pi} = u^{Pj} \equiv u^P$ and $u^{Ni} = u^{Nj} \equiv u^N$, plugging the optimality conditions back into (10a)-(10b) and equating coefficients on both sides of the Bellman equations, we solve for $u_0^P, u_1^P, u_0^N, u_1^N$.[16] Note that this also completes the solution for the CDE above. We therefore have:

Result 2: *There is a unique Markov-perfect political general equilibrium in Nash strategies among political parties. In this equilibrium, the income tax rate, q_t, and the share of total tax revenues used to finance public production services, b_t, are constant over time and equal to:* [17]

$$1-a < q_t \equiv q = \frac{d + (1-a)\Omega}{d + \Omega} < 1 \tag{11a}$$

$$1-a < b_t \equiv b = \frac{(1-a)(d + \Omega)}{d + (1-a)\Omega} < 1 \tag{11b}$$

where,

$$\Omega \equiv g + b[qu_1^P + (1-q)u_1^N] \tag{11c}$$

$$u_1^P = \frac{g(1+d)(1-bq) + (1-g)(1+d)b(1-q)}{(1-b)(1+b-2bq)} > 0 \tag{11d}$$

$$u_1^N = \frac{(1-g)(1+d)(1-bq) + g(1+d)b(1-q)}{(1-b)(1+b-2bq)} > 0 \tag{11e}$$

The channel through which the reelection probability, q, affects the policy instruments, q and b, is the "effective discount rate", Ω. Recall that it is the sign of $\frac{\partial \Omega}{\partial q}$ that drives the results in the existing literature. Specifically, (11c)-(11e) imply that the effect of q on Ω depends on the magnitude of g, where g measures how much political parties care about economic outcomes when they are in power relative

[16] See Asteriou et al. (2000) for details.

[17] Thus, it is optimal to keep policy instruments flat over time. This is a tax smoothing result. This type of policy introduces fewer inter-temporal distortions. See Malley et al. (2001) for details.

to when they are out of power. If $g \geq 0.5$, then $\frac{\partial \Omega}{\partial q} \geq 0$; while if $g < 0.5$, then $\frac{\partial \Omega}{\partial q} < 0$. In other words, if the political parties care about economic outcomes more in than out of power (i.e. $g > 0.5$), the effective discount rate increases with the reelection probability. If the parties care the same whether in or out of power (i.e. $g = 0.5$), the effective discount rate is independent of election outcomes. If the political parties care about economic outcomes more out than in power (i.e. $g < 0.5$), the effective discount rate decreases with the reelection probability. As argued above, most models of the existing literature have considered the case in which $\frac{\partial \Omega}{\partial q} > 0$.

Therefore, we can get the popular result only if we assume $g > 0.5$. In this case, $\frac{\partial q}{\partial q} = \frac{\partial q}{\partial \Omega}\frac{\partial \Omega}{\partial q} < 0$ and $\frac{\partial b}{\partial q} = \frac{\partial b}{\partial \Omega}\frac{\partial \Omega}{\partial q} > 0$.[18] In other words, as the probability of being reelected increases, the total government expenditures-to-output ratio and the associated required tax rate, q, decrease, while the share of tax revenues used to finance government production services, b, increases. In turn, a lower q and a higher b work in the same direction and stimulate economic growth.

We summarize results in the following proposition:

Proposition 1: *Given Result 2, (i) When political parties care about economic outcomes more when in power than out of power, then the lower the reelection probability, the stronger the policymakers' incentive to follow short-sighted inefficient policies, and this is bad for economic growth. (ii) These results are reversed, when political parties care about economic outcomes more when out than in power. (iii) When political parties care about economic outcomes the same irrespectively of whether they are in or out of power, economic policies are independent of reelection probabilities and there are no policy distortions.*

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[18] (11a)-(11e) imply $\frac{\partial q}{\partial q} = \frac{\partial q}{\partial \Omega}\frac{\partial \Omega}{\partial q}$ and $\frac{\partial b}{\partial q} = \frac{\partial b}{\partial \Omega}\frac{\partial \Omega}{\partial q}$. Since $\frac{\partial q}{\partial \Omega} < 0$ from (11a), it follows that if $g \geq 0.5$, then $\frac{\partial q}{\partial q} = \frac{\partial q}{\partial \Omega}\frac{\partial \Omega}{\partial q} \leq 0$, while if $g < 0.5$, then $\frac{\partial q}{\partial q} = \frac{\partial q}{\partial \Omega}\frac{\partial \Omega}{\partial q} > 0$. Also, since $\frac{\partial b}{\partial \Omega} > 0$ from (11b), it follows that if $g \geq 0.5$, then $\frac{\partial b}{\partial q} = \frac{\partial b}{\partial \Omega}\frac{\partial \Omega}{\partial q} \geq 0$, while if $g < 0.5$, then $\frac{\partial b}{\partial q} = \frac{\partial b}{\partial \Omega}\frac{\partial \Omega}{\partial q} < 0$.

Optimal choice of g

Therefore, the presence of distorted policies depends crucially on the magnitude of g. But what is the optimal value of g? That is, what happens if political parties are also free to choose g optimally in (10a)-(10b) above?

The optimal choice of g can be determined by the smooth pasting condition $V_k^P(k_t) = V_k^N(k_t)$.[19] In other words, $u_1^P = u_1^N$ as defined in (11d) and (11e). But $u_1^P = u_1^N$ implies $g = 0.5$. That is, it is optimal for political parties to care about outcomes the same irrespectively of whether they are in power or not. Intuitively, if the parties were fully rational, they would like to eliminate the impact of electoral uncertainty.

We summarize results in the following proposition:

Proposition 2: *Given Proposition 1 above, if the political parties also choose optimally the weights given to economic outcomes when in and out of power, short-sighted policies do not arise.*

IV. CONCLUSIONS

This paper has reconsidered the effect of electoral uncertainty on fiscal policy and economic outcomes. We showed that the popular result of the existing literature (i.e. a lower reelection probability leads to short-sighted policies and low growth) can follow only if we also assume that political parties care about economic outcomes more when in power than out of power, and - more importantly - that this preference over being in power is *ad hoc*. If the political parties can also choose how much to care about economic outcomes in and out of power, it is optimal to care the same. We report that these results are rather robust. For instance, we have experimented with various objective functions by adding more arguments in the policymakers' instantaneous utility function in (10a)-(10b) above. Even if policymakers' objective

[19] Recall that we have two inter-linked dynamic programming problems (see (10a)-(10b)). Then, as is known, there are two types of optimality conditions: value-matching and smooth-pasting. Value-matching conditions ensure a smooth and optimal transition from one regime to another (here, from being in power to being out of power, and vice versa). This has been already satisfied by solving simultaneously for the undetermined coefficients $u_0^P, u_1^P, u_0^N, u_1^N$. Smooth-pasting conditions ensure that the marginal valuation of capital is the same in and out of power. See e.g. Dixit (1991, section 4).

differs from that of the society, the results do not change. That is, it is again optimal to choose "the effective" g so as to eliminate the impact of electoral uncertainty.

Therefore, to get short-sighted, inefficient economic policies (e.g. an excessive size of government and an inefficient composition of its spending), we need more than one distortion [see also the discussion in Mueller (1989, p. 343)]. Here, in addition to electoral uncertainty, we needed a degree of irrationality or fiscal illusion on the part of political parties. Of course, there can be other possible distortions/explanations. For instance, in Laffont (2000), asymmetric information is the additional distortion.[20] Or, we may need to assume that incumbent politicians have more in their objective functions than just the desire to get re-elected.[21]

[20] However, it is difficult to believe that informational advantages on the part of policymakers can explain e.g. the systematic growth of public sectors in the last 40 years.

[21] For instance, bureaucrats do not need to be elected at all. Or maybe there are "rents" associated with office-holding *per se* [see e.g. Mueller (1989) and Drazen (2000)]. At a formal level, see Persson et al. (2000) for a rich model in which politicians are driven by their own selfish objectives, there is no direct democracy so that citizens delegate policy decisions to policy-makers, and political candidates cannot pre-commit themselves to policies ahead of elections.

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