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Why Do Voters Dismantle Checks and Balances?*

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Abstract

Voters often dismantle constitutional checks and balances on the executive. If such checks and balances limit presidential abuses of power and rents, why do voters support their removal? We argue that by reducing politician rents, checks and balances also make it cheaper to bribe or influence politicians through non-electoral means. In weakly-institutionalized polities where such non-electoral influences, particularly by the better organized elite, are a major concern, voters may prefer a political system without checks and balances as a way of insulating politicians from these influences. When they do so, they are effectively accepting a certain amount of politician (presidential) rents in return for redistribution. We show that checks and balances are less likely to emerge when (equilibrium) politician rents are low; when the elite are better organized and are more likely to be able to influence or bribe politicians; and when inequality and potential taxes are high (which makes redistribution more valuable to the majority). We show that the main intuition, that checks and balances, by making politicians "cheaper to bribe," are potentially costly to the majority, is valid under different ways of modeling the form of checks and balances.

Keywords: corruption, checks and balances, political economy, redistribution, separation of powers, taxes.

JEL: H1, O17, P48

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1 Introduction

A central paradigm in political economy, introduced in Barro's and Ferejohn's seminal work, emphasizes the role of elections and constitutional checks in controlling elected politicians. According to this paradigm, politicians are the agents of citizens (voters) to whom various policy decisions have been delegated, and elections are used to ensure that politicians carry out the citizens' wishes, minimize their rents, and limit the policies that they pursue for their own self-interest or ideological agendas. It is also well recognized that elections by themselves may be insufficient to ensure effective control of politicians and citizens may wish to rely on other political institutions, such as various forms of checks and balances and separation of powers which further constrain the behavior of politicians and are complementary to elections. This view of politics and the role of constitutional checks was clearly articulated by James Madison in the Federalist Papers, where he wrote:

> "In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself. A dependence on the people is, no doubt, the primary control on the government; but experience has taught mankind the necessity of auxiliary precautions." (Federalist Papers, # 51, 1788).

Madison's 'auxiliary precautions' included the separation of powers between the executive and a bicameral legislature, indirect election of senators, and an electoral college for determining the president. A version of these ideas has been formalized by Persson, Roland and Tabellini (1997, 2000) who show how a set of political institutions which separates decision-making power over spending and taxation reduces the amount of rents that politicians can extract.

According to Madison and the formal literature building on his insights, voters should be in favor of such checks and balances. Yet, in several cases in Latin America, voters have willingly, sometimes enthusiastically, removed checks and balances designed to limit the ability of politicians (in particular presidents) to pursue their own policy agendas or capture rents.[1] For example, in 1992 President Alberto Fujimori of Peru suspended the sitting congress by issuing Decree 25418, and oversaw new elections in which his supporters gained a majority in the congress. They proceeded to rewrite the constitution moving from a bicameral legislature to an unicameral one, weakening judicial independence and strengthening presidential powers. These changes were popularly approved by a referendum. As Conaghan (2006, p. 2) comments on Fujimori's 1995 re-election, he "interpreted the day's election results as a sign that the public wanted ... [a] democracy led by a president unencumbered by party legislators."

The process of re-writing the constitution to strengthen presidential power has been taken to an extreme in Venezuela. After his first election in 1998 President Hugo Chávez organized

[1] See Carey, Neto and Shugart (1997) for an overview of different presidential powers in Latin America, and Carey and Shugart (1998) for a comparative perspective on presidential decree power.

a constitutional assembly which re-wrote the constitution moving to a unicameral legislature, reallocating legislative powers to the president particularly in the economic and financial spheres. The new constitution was ratified by 72% of the people who voted in a plebiscite in December 1999. In 2000 President Chávez obtained the right to rule by decree for a year without having to get the approval of the legislature. In 2007 this power was renewed and extended to 18 months. It was renewed again in December 2010 for another 18 months. Most of these constitutions and decrees have been approved in referenda, in many cases, with large majorities. Corrales and Penfold (2011, pp.1-2) characterize the situation as one where "freedom exists and the opposition is allowed to compete in elections, but the system of checks and balances becomes inoperative" and this outcomes has "occurred in the context of significant electoral support. Venezuela under Chávez has conducted plenty of elections ... and *chavista* forces have prevailed in all but one."

On September 28, 2008, 64% of Ecuadorian voters enacted a new constitution also with unicameral legislature and increased the powers for president Rafael Correa, who took control of monetary policy back from the central bank and gained the power to suspend the legislature. He was also allowed to run for two more consecutive terms. On January 25, 2009, 61% of Bolivian voters approved a similar new constitution significantly increasing Evo Morales's powers.[2] Like Chávez, Correa and Fujimori, Morales also managed to remove the one-term limit on his presidency, which is commonly interpreted as a significant strengthening of presidential powers (see Carey, 2003).

These recent constitutional changes strengthening presidential power followed on the coattails of similar changes throughout Latin America. The 1979 Constitutions of Ecuador and Peru, the 1988 Constitution of Brazil and the 1992 Constitution of Paraguay all gave presidents the ability to invoke urgency bills that must be voted on within a time limit, significantly increasing their legislative powers. A growing number of constitutions, including the 1988 Constitution of Brazil, the 1991 Constitution of Colombia, the 1993 Constitution of Peru and the 1994 amendment to the Constitution of Argentina, all strengthened the powers of the executive to legislate by enacting decrees.

These salient events highlight two important points. Firstly, the extent of checks and balances in democratic political systems should be thought of as an equilibrium outcome rather than as a historically or exogenously given, immutable institutional characteristic. Secondly and more importantly, the most widely used paradigm for understanding about checks and balances is, by itself, insufficient for thinking about why the majority of voters may wish to remove such checks, since it would suggest that the majority of the citizens should support maximal checks on presidents.

In this paper, we provide a simple theory of equilibrium checks and balances, highlighting why, under certain circumstances, voters may prefer less rather than more checks and balances.

[2] Unlike Fujimori, Chávez and Correa, Morales did not have sufficient power in the constitutional assembly to get everything that he wanted. His party, Movement Towards Socialism, did not have the 2/3 majority required to unilaterally determine constitutional provisions. He was thus unable to get many of the clauses he wanted, such as a unicameral legislature and perpetual presidential re-election.

At the center of our theory is the following observation: in weakly-institutionalized polities, checks and balances, by reducing politician rents, make them "cheaper to buy" or more easy to influence by bribing, lobbying or other non-electoral means. This makes checks and balances a double-edged sword: what makes them valuable to voters—limiting politician rents—also makes them potentially dangerous to the majority.

We consider a society consisting of rich and poor individuals. The poor form the majority and will be able to elect the president, and will also be decisive in a referendum on checks and balances. Politicians are self-interested, but also put some weight on the utility of citizens from their own group, so presidents from the poor group (or more generally from parties representing the poor) will not only use their power to capture rents, but will also redistribute income to the poor. In weakly-institutionalized polities, the rich elite, because they are better organized, wealthier or better connected, often have a greater role in politics than their sheer numbers would suggest.[3] In particular, we model these general non-electoral influences by assuming that, with some probability, the elite are able to bribe or lobby politicians in order to induce policies that they prefer, and in particular, to reduce the extent of redistribution. A president not subject to checks and balances can obtain his "political bliss point" by both redistributing to the poor and also capturing rents for himself. This implies that the rich lobby is relatively powerless against such a president. In contrast, under checks and balances, the president receives few rents, and the rich lobby can more easily capture politics by lobbying or bribing the president. Consequently, when the likelihood that the rich will be able to bribe the politician is low, the majority of the voters prefer checks and balances as suggested by Madison and several previous political-economic analyses. In contrast, when the likelihood that the rich will be able to bribe the politician is high, poor voters are happy to put up with the rents that the politician will capture (or certain idiosyncratic policies that they wish to adopt, for example, as in the case of Hugo Chávez) in return for the guarantee that the politician will not be bought by the rich lobby.

There are several natural comparative statics that arise from this framework. Equilibrium checks and balances are more likely to emerge when (1) the likelihood that the rich will be able to organize, solve their collective action problem and bribe politicians is low; (2) when the potential for taxation of incomes is limited (because when the potential for taxation is high, the extent of redistribution will be high unless the president is bribed); (3) when income inequality is low (because in this case the value of redistributive taxation to the poor majority is more limited).

[3] The literature in comparative politics is broadly consistent with the view that democracy in Latin America, when it has existed, has been captured by elites. In Venezuela, the two-party system which ruled the country from 1958 until the rise of Chávez is often characterized as being under the control of a political/economic oligarchy known as the 'twelve apostles' (Coppedge, 1994, Crisp, 2000). As Chávez himself put it the problem was "how to break with the past, how to overcome this type of democracy that only responds to the interests of the oligarchical sectors; how to get rid of the corruption" (quoted in Wilpert, 2003). In Ecuador, Correa rails against La Oligarcía and El Maletín, the latter being 'the suitcase' used to bring bribes and divert the government from what the mass of citizens want.

The main contribution of our paper is to propose and develop the idea that checks and balances, when they are effective, not only reduce the rents of politicians but also make them "cheaper to buy" for an organized rich lobby. To communicate this idea in the clearest possible fashion, we adopt a simple model of checks and balances as separation of powers whereby the president chooses the level of taxes and transfers, while the legislature can affect the allocation of rents (for example, between projects that the president or the legislature prefers). This modeling approach ensures that when there are checks and balances, the equilibrium level of rents are zero. Though extreme, this approach sharply captures the main impact of checks and balances—to reduce politician rents.

We show that the main insights do not depend on this modeling approach by demonstrating that the same results hold under different assumptions on the formal separation of powers. In particular, we derive similar results using a model in which the extent of checks and balances is captured with the presence (and number) of veto players along the lines of Diermeier and Myerson (1999) and Tsebelis (2002). We also show that identical results apply when separation of powers is modeled as the separation of taxation and spending decisions (between the president and legislature, respectively) as in Persson, Roland and Tabellini (1997, 2000).[4] We also show that the general results are robust to different forms of utility functions for politicians and study the role of legislative institutions that give greater voice to "political minorities" (e.g., including representatives of minority groups, here the elite, in the legislature).

Our paper is related to several literatures. First, it is closely related to the literature on the separation of powers. In addition to Persson, Roland and Tabellini (1997, 2000), which we have already discussed, a large political science literature studies the implications of different democratic political institutions on policies and politicians rents (e.g., Lijphart, 1992, Shugart and Carey, 1992, Huber, 1996, Baron, 1998, Diermeier and Myerson, 1999, Tsebelis, 2002). Second, our paper is also related to other studies emphasizing the potential failure of electoral and institutional controls on politicians (e.g., Acemoglu, Robinson and Verdier, 2004, La Ferrara and Bates, 2001, Bueno de Mesquita et al., 2003, Padro-i-Miquel, 2007, Lizzeri and Persico, 2004, Robinson and Verdier, 2002) and to models of elite capture of democratic politics, for example, Grossman and Helpman (2001), Acemoglu and Robinson (2008) and Acemoglu, Ticchi and Vindigni (2010).

Finally, a number of papers develop different but complementary ideas to our paper. Aghion, Alesina and Trebbi (2004) develop a model in which citizens may wish to delegate different amounts of powers to a politician depending on how aligned their interests are. There is no redistributional conflict or the possibility that a rich elite may bribe politicians away from the

[4] In practice, the interactions between the president and the legislature are more complex than any of these models allows. Even under the most extreme separation of powers, the president can obtain some policy concessions and rents, and he or she is far from powerless in influencing how tax revenues are spent, for example, by using the presidential veto power. Equally, the legislature is, more often than not, involved in tax decisions as much as in spending. We do not wish to argue that any of these models is the "right" approach to the separation of powers. Instead, our purpose is to show that our main results hold under different models of separation of powers.

wishes of the majority. Thus the results and the underlying economic mechanism are very different. Acemoglu, Egorov and Sonin (2011) develop a model of populism based on the idea that in weakly-institutionalized democracies politicians may choose platforms to the left of the median voter as a way of signaling that they are not (secretly) to the right of the median or that they are not secretly corrupted by the elite. None of these papers develop a model of equilibrium checks and balances or notes the main intuition of our paper, that checks and balances make politicians cheaper to bribe or influence through non-electoral means.

The rest of the paper is organized as follows. In Section 2 we set up a very simple model to make our argument as transparent as possible. In Section 3 we extend and change the framework allowing an alternative understanding of checks and balances, a more traditional modelling of separation of powers, letting minority groups in the legislature be allocated political power, and investigating alternative utility functions. Although these extensions and changes introduces new and interesting effects, the basic intuition from the simple model in Section 2 still remains valid. In Section 4 we conclude, while some of the technical details related to our extensions in Section 3 are provided in the Appendix.

2 Basic Model

In this section, we use a simple formalization of the workings of politics under "checks and balances" (or separation of powers) to communicate the basic ideas in our paper. We assume that the president is able to implement his favorite policies without checks and balances, while with checks and balances, some elements of his policy agenda can be modified by the legislature. In the next section, we show that the same results hold under different assumptions on the utility of the politicians, and more importantly, also when we adopt different ways of modeling the separation of powers.

2.1 Demographics and Preferences

We consider a static economy populated by a continuum of agents, with measure normalized to 1. A proportion $1 - \delta > 1/2$ of the population are "poor" with pre-tax income $y^p > 0$, while the remaining δ are "rich" and have pre-tax income $y^r > y^p$. Throughout we use superscript $i \in \{p, r\}$ to denote whether an individual is from the poor or the rich income group. The utility of individual j is given by

$$U^j = c^j, \tag{1}$$

where $c^j \geq 0$ denotes her consumption. With a slight abuse of notation, we use U^j to denote the utility of individual j and U^i, for $i \in \{p, r\}$, to represent the utility of a typical poor or rich agent (in equilibrium agents within an income group will all have the same utility).

For future reference, we define average income in the society as

$$\bar{y} \equiv (1 - \delta) y^p + \delta y^r,$$

and we also define $\theta \in (0,1)$ as the share of total income accruing to rich agents, i.e.,

$$y^r \equiv \frac{\theta}{\delta}\bar{y},$$

and naturally $y^p \equiv (1-\theta)\bar{y}/(1-\delta)$. This formulation implies that θ is a measure of inequality in the society: greater θ corresponds to greater inequality.

2.2 Policies, Politicians and the Constitution

The government, consisting of the president and the legislature, will determine taxes and transfers. We assume that the only tax instrument is a proportional tax rate denoted by $\tau \in [0,1]$, and tax revenues can be used to provide lumpsum transfers to citizens denoted by $T \geq 0$.[5] In addition, tax revenues also finance rents for politicians. We assume that there is a maximum tax rate $\bar{\tau} < 1$, so that $\tau \in [0, \bar{\tau}]$. This may result from the ability of each individual to hide their incomes if taxes are too high.[6]

At any point in time the government consists of a president, denoted by P, and a legislature. In this section, we also simplify the analysis by assuming that the legislature also consists of a single agent, and we denote the legislator by L.[7] With this notation, we denote the rents captured by the president by $R^P \geq 0$, and the rents captured by the legislator by $R^L \geq 0$. The government budget constraint then requires total spending, on transfers and the rents to politicians, to be less than total tax revenues, given by $\tau\bar{y}$, i.e.,

$$T + R^L + R^P \leq \tau\bar{y}. \tag{2}$$

Given this specification, policy can be represented by a vector $\{\tau, T, R^L, R^P\}$ (such that (2) holds and all elements of this vector are nonnegative, which is presumed throughout the rest of the analysis without stating this explicitly).

The exact policy-making procedure depends on the constitution, which takes one of two forms:

1. The constitution may specify *checks and balances*, denoted by $\gamma = 1$, in which case the president and the legislator will jointly set policies. In particular, in this section we assume that the president announces a policy vector with tax rate, transfers and rents, $\{\tau, T, R^L, R^P\}$ and the legislator can only change the allocation of rents $\{R^L, R^P\}$ (i.e., he is unable to change τ and T).[8]

[5] T can alternatively be interpreted as provision of public goods. We allow for targeted transfers in subsection 3.2.

[6] For example, we could suppose that each individual could hide their entire income in the informal sector and receive $(1-\bar{\tau})\,y^j$. This specification implies that taxes greater than $\bar{\tau}$ would never be set. This formulation immediately implies that the most preferred tax rate of the poor is $\bar{\tau}$. It is straightforward to see that none of our results would be affected if we endogenize the most preferred tax rate of the poor, for example, as a function of inequality.

[7] The case of multi–member legislature is discussed in subsection 3.3, and also in the last part of subsection 3.1.

[8] In subection 3.2, we will follow Persson, Roland and Tabellini (2000), in assuming that under checks and balances the president decides the tax rate while the legislature decides the spending vector.

2. The constitution may specify *no checks and balances*, $\gamma = 0$, in which case all decision-making power is vested in the president. The president then determines the entire policy vector $\{\tau, T, R^L, R^P\}$.

Notice that under both types of constitutions, policies are decided by politicians. This implies, in particular, that there is no commitment to policies at the time of elections or any time before implementation of the policies. We assume that citizens in this society first vote in a referendum over the formal constitution, in particular on whether it should include checks and balances, and then vote in the election of the president and legislator. We describe the timing of events in greater detail below.

Politicians belong to one of the two income groups, and they care about the utility of their income group and about their own rents and bribes. We view the feature that politicians care about their social group's income as both a realistic assumption (in particular, given that politicians from a specific social group will often have their and their families' economic fortunes tied to the rest of the group) and also a reduced-form way of capturing the impact of the party of the politician, his ideology or his concern about his longer-term political career on his behavior. More specifically, a politician j from income group $i \in \{p, r\}$ has utility given by

$$V^{j,i} = \alpha v \left(R^j + b^j\right) + (1 - \alpha) U^i, \tag{3}$$

where $\alpha \in (0, 1)$, $b^j \geq 0$ denotes the bribes for politician j, and v is a strictly increasing, strictly concave and continuously differentiable function describing the utility for politicians from rents and bribes. We also assume that this function satisfies the *Inada conditions*: $\lim_{R+b \to 0} v'(R + b) = \infty$ and $\lim_{R+b \to \bar{\tau}\bar{y}} v'(R + b) = 0$, and we normalize $v(0) = 0$. The convenient feature implied by (3) is that because the utility function of the politicians is quasi-linear in U^i, the amount of rents a politician will choose is independent of the level of utility of his group.[9] In what follows, we use $V^{l,i}$ to denote the utility of a politician of income group $i \in \{p, r\}$ holding office $l \in \{L, P\}$.

We also assume that for both the office of the presidency and the legislature, there are two candidates, each randomly elected from one of the income groups. Thus there will be one rich and one poor candidate for presidency, and one rich and one poor candidate for the legislature. This assumption simply ensures that voting is over two candidates. None of our results are affected if there are more than two candidates and voting takes place with transferable votes.

Since $1 - \delta > 1/2$, the poor form the majority and have an electoral advantage. To counteract this, we assume that the rich are better organized and are sometimes able to exert additional influence by bribing (or lobbying) politicians. This is possible when the rich are able to solve their collective action problem and can organize to bribe politicians. How this collective action

[9] In particular, the important feature for our results is that the politician should choose an intermediate level of rents for himself and that when they are lower, he should be more willing to sacrifice the utility of his constituency for increasing these rents. Quasi-linear preferences yield this feature in a simple way. In subsection 3.4, we show that the same results can be obtained without quasi-linearity.

problem is solved is not essential for our analysis. We therefore assume that they are able to do so with probability $q \in [0,1]$. When the rich are able to solve their collective action problem, we denote this by $\kappa = 1$, with $\kappa = 0$ denoting the converse.

When the rich are able to do so, they can pay a bribe $b^P \geq 0$ to the president and/or $b^L \geq 0$ to the legislature. We follow the lobbying literature, for example, Grossman and Helpman (1994), by assuming that bribes are paid conditional on the delivery of a certain policy. Thus a bribe offer to politician j is a vector $\left\{\hat{b}^j, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P\right\}$ such that if the politician implements $\left\{\hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P\right\}$, he receives $\hat{b}^j$, and zero otherwise. In fact, in what follows we can, without loss of any generality, restrict the bribe offers to depend only on the policy components that the politician in question directly controls, and thus under no checks and balances, we simply focus on $\left\{\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^P\right\}$ as the bribe offer for the president, and under checks and balances, we can focus on $\left\{\hat{b}^P, \hat{\tau}, \hat{T}\right\}$ for the president and $\left\{\hat{b}^L, \hat{R}^L, \hat{R}^P\right\}$ for the legislator.

If the rich pay a total bribe of $B = b^L + b^P$, each rich agent contributes equally, i.e., an amount B/δ. Consequently, given a policy vector $\{\tau, T, R^L, R^P\}$, the utilities of poor and rich agents can be written as

$$U^p = (1-\tau)y^p + T, \tag{4}$$

and

$$U^r = (1-\tau)y^r + T - \frac{b^L + b^P}{\delta}. \tag{5}$$

2.3 Timing of Events and Equilibrium Concept

To summarize, the timing of events is as follows.

1. There is a referendum on whether the constitution should include checks and balances, i.e., there is a vote between $\gamma = 0$ and $\gamma = 1$. Whichever constitution receives an absolute majority is implemented.

2. Elections are held simultaneously for the office of the president and for the legislature. Whichever candidate receives an absolute majority in each post is elected.

3. All uncertainty is revealed. In particular, it becomes common knowledge whether the rich will be able to solve their collective action problem.

4. If the rich are able to solve their collective action problem, then they make bribe offers to the president and the legislator.

5. If the constitution does not include checks and balances, then the president decides the entire policy vector $\{\tau, T, R^L, R^P\}$.

   If the constitution includes checks and balances, then the president proposes a policy vector $\{\tau, T, R^L, R^P\}$. After observing this policy vector, the legislator decides whether to change the allocation of rents $\{R^L, R^P\}$.

6. Policies are implemented, bribes are paid, and all payoffs are realized.

A strategy for poor agents, σ^p, simply determines their votes in the referendum and in the election for the presidency and the legislature. A strategy for rich agents, σ^r, determines their votes in the referendum and for the presidency and the legislature, and given the realization of uncertainty about the collective action problem, it also determines their bribe offers. A strategy for politician j for office $l \in \{L, P\}$, $\sigma^{l,j}$ determines their policies as a function of the bribe offer of the rich lobby. A subgame perfect equilibrium (SPE) is defined as usual as a strategy profile in which all actions are best responses to other strategies in all histories. Since individuals take part in (multiple rounds of) voting, the set of SPE includes unreasonable equilibria in which all individuals use weakly dominated strategies (voting in favor of politicians that give them strictly lower utility because everybody else is doing so). We therefore focus on SPE in undominated strategies, and we refer to these simply as *equilibrium* throughout.[10]

We next characterize the equilibria of the economy described so far. As usual, this will be done by backward induction. We start with a given constitution, a given election outcome, and given types of politicians. We then characterize policy choices for different bribe offers (if any) from the rich lobby. After this characterization, we go to the earlier stages of the game, where we determine voting over politicians and voting in the referendum between constitutions with and without checks and balances. A full characterization of equilibrium would specify policies for any combination of politicians (rich president versus poor legislator, etc.). However, we show below that even taking into account the possibility of bribes, the poor always prefer to elect presidents and legislators from their own group. For this reason, until we study the case of multi-member legislature in subsection 3.3, we limit attention (without loss of any generality) to situations in which all politicians are from the poor income group.

2.4 Equilibrium without Checks and Balances

Suppose that the referendum has led to a constitution *without checks and balances*, i.e., $\gamma = 0$. In this case, all policies are decided by the president, and we can ignore the legislator.

Consider first the case in which $\kappa = 0$ so that the rich are not able to solve their collective action problem and will not make a bribe offer. Then, in the policy-making subgame, the president will solve the program

$$V^{P,p}[\gamma = 0, \kappa = 0] \equiv \max_{\{\tau, T, R^L, R^P\}} \alpha v\left(R^P\right) + (1-\alpha)\left((1-\tau)y^p + T\right),$$

subject to the government budget constraint (2) (where, as usual, all of the elements of the vector $\{\tau, T, R^L, R^P\}$ are implicitly taken to be nonnegative). This expression also defines

[10] A further technical detail is that because voting is dynamic (first in the referendum and then for politicians), a slightly stronger notion than elimination of weakly dominated strategies is necessary. Acemoglu, Egorov and Sonin (2009) propose sequentially eliminating weakly dominated strategies or the slightly stronger concept of Markov Trembling Hand Perfect Equilibrium for this class of games and show that either equilibrium notion eliminates all "unreasonable equilibria" and exists in finite games with agenda-setting structure. All of the equilibria studied here are Markov Trembling Hand Perfect. In fact, here, it is simply sufficient to eliminate equilibria where individuals vote for constitution/politicians that give them (strictly) lower utility.

$V^{P,p}[\gamma = 0, \kappa = 0]$ as the value of the maximized program, i.e., the value of the president under no checks and balances and when the rich are not able to solve the collective action problem to bribe him. In view of the strict concavity of v, this problem has a unique solution. Moreover, the solution will involve all incomes being taxed at the maximum rate, $\bar{\tau}$, with all the proceeds spent on rents to the president and transfers (so that government budget constraint (2) holds as equality). The rents to the president are given by R^*, which satisfies

$$\alpha v'(R^*) = 1 - \alpha. \tag{6}$$

The Inada conditions we imposed on v ensure that R^* is feasible given the government budget constraint, i.e., $R^* < \bar{\tau}\bar{y}$. Then the transfer is given by $T = \bar{\tau}\bar{y} - R^*$. Note for future reference that in this case the utility of poor agents is given by

$$U^p[\gamma = 0, \kappa = 0] = \frac{(1 - \theta + (\theta - \delta)\bar{\tau})\,\bar{y} - (1 - \delta)R^*}{1 - \delta}. \tag{7}$$

Next, suppose that $\kappa = 1$. In this case, the rich lobby can make a bribe offer, $\left\{\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^P\right\}$ to the president. Let the utility that the president derives from accepting this offer and implementing the specified policy vector be $V^{P,p}\left(\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^P\right)$. By turning down this offer, the president can always obtain $V^{P,p}[\gamma = 0, \kappa = 0]$. Therefore, the bribe offer by the rich lobby must satisfy the president's participation constraint

$$\begin{aligned} V^{P,p}\left(\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^P\right) &\geq V^{P,p}[\gamma = 0, \kappa = 0] \\ &\equiv \alpha v(R^*) + (1 - \alpha)\frac{(1 - \theta + (\theta - \delta)\bar{\tau})\,\bar{y} - (1 - \delta)R^*}{1 - \delta}, \end{aligned} \tag{8}$$

where the second relation uses (7). The problem of the rich lobby in this case can thus be written as

$$U^r\left(\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^P\right) \equiv \max_{\left\{\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^P\right\}} (1 - \hat{\tau})\,y^r + \hat{T} - \frac{\hat{b}^P}{\delta},$$

subject to (2) and (8). If the solution to this program gives the rich a utility level lower than $U^r[\gamma = 0, \kappa = 0]$, then they prefer not to offer bribes (which is equivalent to making an offer identical to what the president would have chosen by himself together with $\hat{b}^P = 0$).

We can now see that in this case the rich lobby can never get higher utility by offering a bribe to the president. Observe from (6) that as $R^* < \bar{\tau}\bar{y}$, additional tax revenue is always used as transfers. This implies that if the rich lobby proposed a lower tax rate, they would need to pay a bribe to the president that is greater than what they save in taxes, which is not worthwhile.[11] Thus $\hat{b}^P = 0$. The utility of the poor is the same independently of the rich lobby being organized or not, i.e. $U^p[\gamma = 0, \kappa = 0] = U^p[\gamma = 0, \kappa = 1] = U^p[\gamma = 0]$.

The intuition for this result, though simple, is worth emphasizing. Because the president is politically powerful under a constitution that does not feature checks and balances, he obtains

[11] Formally, they could make an offer $\left\{\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^P\right\}$ that would have both $\hat{b}^P > 0$ and $\hat{\tau} < \bar{\tau}$ which would imply that they have to pay a higher bribe than what they save in taxes.

a high level of utility; in fact, here the president is able to obtain his *political bliss point.* Importantly, this makes him *expensive* to bribe and thus unprofitable for the rich lobby to influence policy.

The following proposition summarizes the results discussed in this subsection (proof in the text).

Proposition 1 *Suppose the constitution involves no checks and balances (i.e., $\gamma = 0$). Then, regardless of whether $\kappa = 0$ or $\kappa = 1$, the equilibrium policy involves $\tau = \bar{\tau}$, $R^P = R^*$ (as given by (6)), $R^L = 0$, $b^P = 0$, $b^L = 0$, and $T = \bar{\tau}\bar{y} - R^*$. The utility of poor agents in this case is given by (7).*

2.5 Equilibrium under Checks and Balances

Suppose now that the referendum has led to a constitution $\gamma = 1$ with checks and balances. In this case the president proposes the policy vector $\{\tau, T, R^L, R^P\}$. Given this policy vector, the legislator can decide to change the allocation of rents, i.e., he effectively decides $\{R^L, R^P\}$ given $\{\tau, T\}$.

When $\kappa = 0$ the rich are not able to solve their collective action problem and will not make a bribe offer. In the policy-making subgame, the legislator will take $\{\tau, T\}$ as given and solve the program

$$V^{L,p}[\tau, T, \gamma = 1, \kappa = 0] \equiv \max_{\{R^L, R^P\}} \alpha v\left(R^L\right) + (1-\alpha)\left((1-\tau)y^p + T\right),$$

subject to the government budget constraint (2) and the policy vector $\{\tau, T\}$ decided by the president. The solution to this problem involves $R^P = 0$ and

$$R^L = \tau\bar{y} - T. \tag{9}$$

Given this, in the prior subgame the president sets the tax rate and transfers so as to maximize

$$V^{P,p}[\gamma = 1, \kappa = 0] \equiv \max_{\{\tau, T\}} \alpha v\left(R^P\right) + (1-\alpha)\left((1-\tau)y^p + T\right),$$

subject to the government budget constraint (2) and the best response of the legislator, i.e., $R^P = 0$ and R^L given by (9). Substituting for R^P, this implies that $\{\tau, T^p\}$ will be chosen to maximize

$$\alpha v(0) + (1-\alpha)\left((1-\tau)y^p + T\right) = (1-\alpha)\,U^p,$$

i.e., to maximize the utility of poor citizens. Intuitively, with checks and balances, the legislator will not allow the president to obtain any rents (instead grabbing all the rents himself). This then induces the president to set zero rents for all politicians, which maximizes the utility of the poor (recall that, so far, there is no bribing from the rich lobby). Consequently, in this case, the utility of poor agents is maximized and is equal to

$$U^p[\gamma = 1, \kappa = 0] = \frac{(1-\theta+(\theta-\delta)\bar{\tau})\,\bar{y}}{1-\delta} > U^p[\gamma = 0, \kappa = 0]. \tag{10}$$

But the utility of the president is now lower than in the case without checks and balances, i.e.,

$$V^{P,p}\left[\gamma=1,\kappa=0\right]=(1-\alpha)\,\frac{(1-\theta+(\theta-\delta)\bar{\tau})\,\bar{y}}{1-\delta}<V^{P,p}\left[\gamma=0,\kappa=0\right],$$

which implies that the president is strictly worse off because of the presence of checks and balances in the constitution.

Crucially, this advantage of checks and balances in terms of controlling the president is a double-edged sword, because it also makes the president *cheaper to buy* as we will now see by considering the case in which the rich lobby is organized. In particular, suppose now that $\kappa=1$ (as well as $\gamma=1$). Then the rich lobby will make bribe offers $\left\{\hat{b}^L,\hat{R}^L,\hat{R}^P\right\}$ and $\left\{\hat{b}^P,\hat{\tau},\hat{T}\right\}$ to the legislator and the president, respectively. For the politicians to accept these bribe offers they must satisfy the participation constraints

$$V^{L,p}\left(\hat{b}^L,\hat{\tau},\hat{T},\hat{R}^L,\hat{R}^P\right)\geq V^{L,p}\left[\gamma=1,\kappa=0\right],$$

and

$$V^{P,p}\left(\hat{b}^P,\hat{\tau},\hat{T},\hat{R}^L,\hat{R}^P\right)\geq V^{P,p}\left[\gamma=1,\kappa=0\right].$$

Consider first the bribing of the legislator. Since none of the politicians get rents, the rich has nothing to gain by bribing the legislator to change the allocation of rents. Thus $\hat{b}^L=0$.

Consider next bribes from the rich lobby to the president. As noted above, under checks and balances, the president does not receive any rents and is thus relatively cheap to bribe. In particular, the rich lobby can offer bribes to the president in exchange for lower taxes and less transfers. Since when $R^P=0$ the marginal utility of bribes is greater than the president's marginal utility of transfers to the poor, it is always beneficial for the rich elite to pay a positive bribe to the president in return for less redistribution to the poor. The rich lobby maximizes their own utility given the participation constraint of the president, the budget constraint and a constraint that the tax rate is nonnegative. Taking into account that $R^P=0$, the problem of the rich lobby can thus be written as

$$\begin{aligned}&\max_{\left\{\hat{b}^P,\hat{\tau},\hat{T}\right\}}\ (1-\hat{\tau})\,y^r+\hat{T}-\frac{\hat{b}^P}{\delta}\ \text{subject to}\\&\alpha v\left(\hat{b}^P\right)+(1-\alpha)\left((1-\hat{\tau})y^p+\hat{T}\right)\geq(1-\alpha)\left((1-\bar{\tau})y^p+\bar{\tau}\bar{y}\right)\\&\hat{\tau}\geq 0\\&\hat{\tau}\bar{y}\geq\hat{T}.\end{aligned}$$

Substituting for $y^p\equiv(1-\theta)\bar{y}/\left(1-\delta\right)$ and $y^r\equiv\theta\bar{y}/\delta$, and taking into account that the budget constraint will hold with equality, this can be reformulated as

$$\max_{\left\{\hat{b}^P,\hat{\tau}\right\}}\frac{(\theta-(\theta-\delta)\hat{\tau})\,\bar{y}}{\delta}-\frac{\hat{b}^P}{\delta}$$

subject to

$$\alpha v\left(\hat{b}^P\right)\geq(1-\alpha)\,\frac{(\bar{\tau}-\hat{\tau})\,(\theta-\delta)\bar{y}}{1-\delta},\tag{11}$$

and $\hat{\tau} \geq 0$, where (11) is the participation constraint of the president, ensuring that he receives greater utility with bribery than he would do without. Denoting the multiplier on (11) by λ_1 and on the constraint that $\hat{\tau} \geq 0$ by λ_2, the first-order conditions are that the derivatives of the maximization problem with respect to $\hat{b}^P$ and $\hat{\tau}$ must satisfy:

$$-\frac{1}{\delta} + \lambda_1 \alpha v'\left(\hat{b}^P\right) = 0, \tag{12}$$

and

$$-\frac{(\theta - \delta)\,\bar{y}}{\delta} + \lambda_1 (1-\alpha)\,\frac{(\theta-\delta)\bar{y}}{1-\delta} + \lambda_2 = 0. \tag{13}$$

From (12) it follows that $\lambda_1 > 0$, implying that the participation constraint of the president, (11), binds. Now using (12) to eliminate λ_1 from (13), we find that if

$$\frac{\alpha}{1-\alpha} v'\left(\hat{b}^P\right) > \frac{1}{1-\delta}, \tag{14}$$

then $\lambda_2 > 0$, which also implies $\hat{\tau} = 0$. Conversely, if (14) does not hold, then $\lambda_2 = 0$ and $\hat{\tau} > 0$.

Next, if $\hat{\tau} = 0$, then from constraint (11) holding as equality, we can see that the equilibrium bribe from the rich lobby, $\hat{b}^P$, must be decreasing in α, i.e., $\hat{b}^P = \hat{b}^P(\alpha)$ with $\hat{b}^{P\prime}(\alpha) < 0$. This implies that the left-hand side of (14) is increasing in α while the right-hand side does not depend on α. The following equation thus implicitly defines a unique value of α, α^*, such that

$$\frac{\alpha^*}{1-\alpha^*} v'\left(\hat{b}^P(\alpha^*)\right) = \frac{1}{1-\delta}. \tag{15}$$

If $\alpha > \alpha^*$ so that politicians care sufficiently about rents and not much about the utility of the poor, then we have $\hat{\tau} = 0$. The utility of poor agents in this case is given by

$$U^p\left[\gamma = 1, \kappa = 1\right] = \frac{(1-\theta)\,\bar{y}}{1-\delta}. \tag{16}$$

If, in contrast, $\alpha < \alpha^*$ so that politicians care more about the utility of their group, then $\hat{\tau} > 0$. In this case, equilibrium bribe is $\hat{b}^P = b^*$ such that

$$v'\left(b^*\right) = \frac{1-\alpha}{\alpha(1-\delta)}. \tag{17}$$

From the participation constraint of the president, (11), we obtain the equilibrium tax rate as a function of the bribe $\hat{b}^P$ as

$$\hat{\tau} = \bar{\tau} - \frac{\alpha v\left(\hat{b}^P\right)(1-\delta)}{(1-\alpha)(\theta-\delta)\bar{y}} = \bar{\tau} - \frac{v\left(b^*\right)}{v'\left(b^*\right)(\theta-\delta)\bar{y}} < \bar{\tau}, \tag{18}$$

which in turn gives the utility of poor agents in this case as

$$U^p\left[\gamma = 1, \kappa = 1\right] = \frac{\left(1 - \theta + (\theta-\delta)\bar{\tau}\right)\bar{y} - \frac{v(b^*)}{v'(b^*)}}{1-\delta}. \tag{19}$$

Note that in this case the utility of poor agents directly depends on the equilibrium bribe b^* the rich lobby pays to the president as this determines the equilibrium tax rate as shown in (18).

It is also straightforward to verify that in both regimes, the participation constraints of the rich are satisfied (as strict inequality).[12]

The preceding analysis has then established (proof in text):

Proposition 2 *Suppose that the constitution involves checks and balances (i.e., $\gamma = 1$). Then:*

1. *When $\kappa = 0$ so that the rich lobby is not organized and there is no bribing, the equilibrium involves $\tau = \bar{\tau}$, $R^P = 0$, $R^L = 0$, $T = \bar{\tau}\bar{y}$, and the utility of poor agents is given by (10).*

2. *When $\kappa = 1$ so that the rich lobby is organized and there is bribing, then the equilibrium is as follows:*

   (a) If $\alpha > \alpha^*$, then $\tau = 0$, and $R^P = 0$, $R^L = 0$, $b^P > 0$, $b^L = 0$, $T = 0$, and the utility of poor agents is given by (16).

   (b) If $\alpha < \alpha^*$, then $R^P = 0$, $R^L = 0$, $b^P = b^*$, $b^L = 0$, $T = \tau\bar{y}$,

$$\tau = \bar{\tau} - \frac{v(b^*)}{v'(b^*)(\theta - \delta)\bar{y}},$$

and the utility of poor agents is given by (19).

Taking into account that the probability the rich can solve their collective action problem and bribe politicians is q, we have that:

If $\alpha > \alpha^*$, then the expected utility of the poor is given by

$$U^p[\gamma = 1] = \frac{(1 - \theta + (1-q)(\theta - \delta)\bar{\tau})\,\bar{y}}{1 - \delta}. \tag{20}$$

If $\alpha < \alpha^*$, then the expected utility of the poor is given by

$$U^p[\gamma = 1] = \frac{(1 - \theta + (\theta - \delta)\bar{\tau})\,\bar{y} - q\frac{v(b^*)}{v'(b^*)}}{1 - \delta}. \tag{21}$$

The economic content of this proposition is simple. Checks and balances limit the possibility that politicians divert public resources for personal rents. All else equal, this increases the utility of all voters. In particular, if the rich lobby is not organized and cannot bribe the president, then the utility of poor agents is given by (10), which is the highest feasible utility that they can obtain given the policy instruments. However, checks and balances also make the president relatively "cheap to bribe". Thus when the rich elite are able to overcome their collective action problem, they can effectively bribe the president to limit redistribution to the poor, reducing the utility of poor voter (both (16) and (19) are necessarily less than (10)).

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[12] In particular, when $\alpha > \alpha^*$, the participation constraint is simply $(\theta - \delta)\,\bar{\tau}\bar{y} \geq \hat{b}^P$. To see that it is satisfied with strict inequality, note first that from (11), $(\theta - \delta)\bar{\tau}\bar{y} = \frac{\alpha(1-\delta)v(\hat{b}^P)}{1-\alpha}$, which enables us to write the participation constraint of the rich as $v\left(\hat{b}^P\right) \geq \frac{1-\alpha}{\alpha(1-\delta)}\hat{b}^P$. Since $\alpha > \alpha^*$ is equivalent to (14), we have $v'\left(\hat{b}^P\right) > \frac{1-\alpha}{\alpha(1-\delta)}$, and thus $v\left(\hat{b}^P\right) > v'\left(\hat{b}^P\right)\hat{b}^P$, which is always the case due to the strict concavity of v.

Next consider the case where $\alpha < \alpha^*$. In this case, the participation constraint of the rich is given by $(\theta - \delta)(\bar{\tau} - \hat{\tau})\bar{y} \geq b^*$. Inserting for $(\bar{\tau} - \hat{\tau})$ from (11), and then using (17), this again reduces to $v(b^*) \geq v'(b^*)\,b^*$, which again holds as strict inequality due to the strict concavity of v.

2.6 Elections

With no checks and balances in the constitution a president from the poor will always set the tax rate at the maximum, offering redistribution to the poor. Given the politician utility function in (3), a president from the rich group would capture the same amount of rents as a president from the poor, but would not redistribute to the poor. Therefore, the poor strictly prefer to vote for the poor candidate. In this case, as the legislature has no political power utility of the poor is independent of from which income group the legislator originates. Thus without checks and balances voting for poor politician in the presidential election is a weakly undominated strategy for poor citizens.

With checks and balances and no bribing, a president from the poor will set policy so as to maximize the utility of the poor. If, on the other hand, there are bribes from the rich lobby, it can be easily verified that a president from the rich group will again offer no redistribution to the poor, whereas the president from the poor group, as we have seen in Proposition 2, sometimes does. Moreover, the legislator will prevent the president from getting rents whichever income group the legislator originates from. Thus also with checks and balances voting for a poor politician in the presidential election is again a weakly undominated strategy for poor citizens. In the rest of this section, we also adopt the convention that they vote for poor candidates in the legislative elections, though this has no bearing on the results.

2.7 Referendum and Equilibrium Checks and Balances

The more interesting voting stage in our model is the referendum on whether to constitution should include checks and balances. This will depend on whether the expected utility of a poor agent (before knowing whether the rich lobby is organized) is greater without checks and balances as in Proposition 1 or with checks and balances as in Proposition 2. The next proposition answers this question:

Proposition 3 *1. Suppose that $\alpha > \alpha^*$. Then the constitution will involve no checks and balances, i.e., $\gamma = 0$, if*

$$q > \frac{(1-\delta)R^*}{(\theta-\delta)\bar{\tau}\bar{y}}, \tag{22}$$

and it will involve checks and balances if the converse inequality holds.

2. Suppose that $\alpha < \alpha^*$. Then the constitution will involve no checks and balances, i.e., $\gamma = 1$, if

$$q > \frac{v'(b^*)(1-\delta)R^*}{v(b^*)}, \tag{23}$$

and it will involve checks and balances if the converse inequality holds.

In both cases, a greater q (a greater likelihood of the rich lobby being organized) makes a constitution without checks and balances more likely (in the sense that the set of parameters for which the constitution does not involve checks and balances is larger).

Proof. An individual from the poor income group (strictly) prefers a constitution without checks and balances when $U^p[\gamma = 0] > U^p[\gamma = 1]$, and given our focus on voting using weakly undominated strategies, the referendum will lead to the outcome preferred by the poor majority. Using (7) and (20), we then obtain part 1. Using (7) and (21), we obtain part 2. The last part of the proposition directly follows from parts 1 and 2. ■

This proposition is the main result of the paper. First, it shows that voters may rationally choose no checks and balances. They realize that checks and balances imply lower politician rents (in fact, in our simple model no rents). However, they also understand that this makes politicians "cheaper to buy" for the rich lobby. Thus when they expect the rich lobby to bribe the president, they prefer a constitution without checks and balances as a way of making the president too expensive for the rich lobby to buy. We believe that this result, in a stylized way, captures the main reason why, in many weakly-institutionalized polities (where the elite can successfully bribe politicians or influence policies using non-electoral means), voters are willing to put up with strong leaders pursuing their own agendas, provided that they are also expected to adopt redistributive policies. In fact, in many such cases they are even willing to remove several constitutional checks on such politicians.

Second, for this same intuitive reasons, the proposition also shows that when the probability that the rich will be will be organized, q, is greater, a constitution without checks and balances is more likely to be preferred by the poor majority. For example, when $\alpha > \alpha^*$ and when income inequality θ is sufficiently high (sufficiently close to 1), the constitution will never involve checks and balances when $q = 1$ because as $\theta \to 1$, (22) is equivalent to $R^* < \bar{\tau}\bar{y}$ which always holds because of the Inada conditions we imposed.

Proposition 3 also shows that a constitution without checks and balances is more likely when (equilibrium) politician rents given by R^* are low. Even though R^* is an endogenous object in this economy, it is simply determined by the v function and α (as shown by equation (6)).

The next corollary to Proposition 3 emphasizes that the only reason why poor voters may support a constitution without checks and balances is political corruption.

Corollary 1 *If $q = 0$, so that the rich are never able to bribe politicians, then the constitution will always include checks and balances.*

Proof. This immediately follows by noting that neither (22) nor (23) will hold when $q = 0$. ■

The reasoning of Proposition 3 highlights that voters are willing to put up with politician rents (resulting from the lack of checks and balances) in return for redistribution. The next two corollaries formalize this notion by showing that (when $\alpha > \alpha^*$) a constitution without checks and balances is more likely when inequality is greater and redistribution more valuable to the poor, and when potential taxes are higher.

Corollary 2 *Suppose $q > 0$. When $\alpha > \alpha^*$, a constitution without checks and balances is more* *likely when θ is greater (when income inequality is higher). (When $\alpha < \alpha^*$, θ has no effect on the choice of checks and balances in the constitution).*

Proof. This result directly follows by noting when $\alpha > \alpha^*$ the right-hand side of (22) is decreasing in θ (and when $\alpha < \alpha^*$ (23) does not depend on θ). ■

When $\alpha < \alpha^*$ (which implies that politicians put sufficiently large weight on the utility of the poor), the comparison of constitutions with and without checks and balances is independent of inequality. This is because of the quasi-linear utility function in (3), which implies that the equilibrium level of bribes is independent of the level of inequality when $\alpha < \alpha^*$. This same observation also gives the intuition for the next corollary.

Corollary 3 *Suppose $q > 0$. When $\alpha > \alpha^*$, a constitution without checks and balances is more likely when $\bar{\tau}$ is higher (when potential taxes are higher). (When $\alpha < \alpha^*$, $\bar{\tau}$ has no effect on the choice of checks and balances in the constitution).*

Proof. This result directly follows by noting when $\alpha > \alpha^*$ the right-hand side of (22) is decreasing in $\bar{\tau}$ (and when $\alpha < \alpha^*$ (23) does not contain $\bar{\tau}$). ■

The political power of the elite rests on their ability to overcome their collective action problem so as to be able to influence policy through non-electoral means. The next corollary shows, perhaps somewhat paradoxically, that a better ability to overcome the collective action problem may in fact reduce the political power and utility of the elite. To see this, define q^* as the value of q that solves (22) with equality when $\alpha > \alpha^*$ and as the q that solves (23) with equality when $\alpha < \alpha^*$.

Corollary 4 *The expected utility of the rich as a function of q is increasing in q for $q \in [0, q^*)$; jumps down in q at $q = q^*$; and is constant in q for $q \in [q^*, 1]$.*

Proof. For $q < q^*$, it follows from (22) and (23) that the constitution will always involve checks and balances. The expected utility of the rich when the constitution includes checks and balances is given by

$$\begin{aligned} U^r[\gamma = 1] &= \frac{(\theta - (\theta - \delta)\bar{\tau})\,\bar{y}}{\delta} + q\left(\frac{(\bar{\tau} - \hat{\tau})\,(\theta - \delta)\bar{y} - \hat{b}^P}{\delta}\right) \\ &= \frac{(\theta - (\theta - \delta)\bar{\tau})\,\bar{y}}{\delta} + \frac{q\hat{b}^P}{\delta}\left(\frac{(1-\delta)\alpha v\left(\hat{b}^P\right)}{(1-\alpha)\,\hat{b}^P} - 1\right), \end{aligned}$$

where the second line follows from (11) always holding as equality.

When $\alpha > \alpha^*$ we use (15) to obtain

$$U^r[\gamma = 1] = \frac{(\theta - (\theta - \delta)\bar{\tau})\,\bar{y}}{\delta} + \frac{q\hat{b}^P}{\delta}\left(\frac{\alpha(1-\alpha^*)v\left(\hat{b}^P\right)}{\alpha^*(1-\alpha)v'\left(\hat{b}^P(\alpha^*)\right)\hat{b}^P} - 1\right),$$

which is increasing in q for $\alpha > \alpha^*$ (since in this case $\hat{b}^P \leq \hat{b}^P(\alpha^*)$ which implies that $v\left(\hat{b}^P\right) > v'\left(\hat{b}^P(\alpha^*)\right)\hat{b}^P$).

When $\alpha < \alpha^*$ we use (17) to obtain

$$U^r[\gamma = 1] = \frac{(\theta - (\theta - \delta)\bar{\tau})\,\bar{y}}{\delta} + \frac{qb^*}{\delta}\left(\frac{v(b^*)}{v'(b^*)\,b^*} - 1\right),$$

which is also increasing in q.

For $q > q^*$, it follows from (22) and (23) that the constitution will never involve checks and balances, in which case the utility of the rich is given by

$$U^r[\gamma = 0] = \frac{(\theta - (\theta - \delta)\bar{\tau})\,\bar{y} - \delta R^*}{\delta},$$

which is independent of q. Comparing $U^r[\gamma = 0]$ with $U^r[\gamma = 1]$ we see that the latter always exceeds the former, and the corollary follows. ■

In sum, our baseline model shows that poor voters, who make up the majority and would like to see income redistribution, may prefer a constitution without checks and balances because checks and balances, by reducing politician rents, make them "cheaper to buy" for the rich lobby. Our analysis also shows that a constitution without checks and balances is more likely when: (1) (equilibrium) politician rents are low; (2) the rich are more likely to solve the collective action problem and successfully bribe politicians; (3) income inequality is greater, making redistribution more valuable to the poor; and (4) potential taxes are higher, again making redistribution more valuable.

3 Robustness and Extensions

The main insight we have emphasized so far is that checks and balances may be costly for the poor majority because, by reducing the president's rents, they make him more amenable to lobbying and bribery by an organized rich lobby. In this section, we show that this main insight is robust under a variety of different modeling assumptions. We first consider another model of separation of powers, along the lines of Diermeier and Myerson (1999) and Tsebelis (2002), where checks and balances give the legislature veto power over all dimensions of policy. We next show that if instead of our simple model of separation of powers, we adopt the Persson, Roland and Tabellini (1997, 2000) approach of assuming that, under separation of powers, the president decides the tax rate and the legislature makes the spending decisions, all of our results generalize. We next use this framework to discuss how including political minorities (representatives of the rich elite) in the legislature affects the results. Finally, we also show that the same results apply when we relax the quasi-linearity of the utility of politicians.

3.1 Checks and Balances as Veto Powers

In Section 2, we modeled checks and balances as corresponding to a separation of policy decisions between the president and the legislature. A complimentary view of checks and balances relates it to the existence and power of "veto players", for example as in Diermeier and Myerson (1999) and Tsebelis (2002). We now show that the general insights presented so far continue to hold with this alternative but complementary view of checks and balances.

More specifically, we start, again, with the legislature consisting of a single chamber and a single legislator, who again represents the poor (all of these features will be relaxed below). We then adopt the following stylized game as a representation of the process of bargaining and political interactions between the president and the legislature in the presence of checks and balances:

1. The president proposes a tax rate τ. If the legislator agrees, the tax rate is implemented. If the legislator vetoes the tax rate, then the legislator proposes a new tax rate. If the president agrees, the tax rate is implemented. If the president vetoes the tax rate, the status quo tax rate $\widetilde{\tau} \leq \bar{\tau}$ is implemented.

2. The president proposes transfers T (limited by the total budget $\tau\bar{y}$). If the legislator agrees, then the transfer is implemented. If the legislator vetoes the transfer, the legislator proposes a new transfer. If the president agrees the transfer is implemented. If the president vetoes the transfer, the status quo transfer $\widetilde{T}$ is implemented.

3. The president proposes rents R^P to himself (limited by the available budget $\tau\bar{y} - T$). If the legislator agrees the rents are implemented. If the legislator vetoes the rents, the legislator proposes a new rent allocation to the president. If the president agrees, the rents are implemented. If the president vetoes the rents, then the status quo rents $\widetilde{R^P}$ is implemented.

4. The president proposes rents R^L to the legislator (limited by the available budget $\tau\bar{y} - T - R^P$). If the legislator agrees, the rents are implemented. If the legislator vetoes, the legislator proposes a new rent allocation. If the president agrees the rents are implemented. If the president vetoes, the status quo rents $\widetilde{R^L}$ is implemented.

5. Any remaining funds on the budget; $\tau\bar{y} - T - R^P - R^L$ are distributed lump-sum to citizens.

There are two special features of this game that are worth noting. First, rather than the entire vector of policies and rents being agreed at once, they are being negotiated component by component. Second, the last player to make proposals before the status quo is implemented is always the legislator. Both of these features are adopted to simplify the analysis. Moreover, it will be clear from our analysis that the exact sequencing of policy decisions has no bearing on the results. Finally, let us also simplify the algebra by setting $\widetilde{R^P} = \widetilde{R^L} = 0$. Clearly, greater values of $\widetilde{R^P}$ and $\widetilde{R^L}$ make checks and balances less attractive to voters. Thus the simplifying assumption makes checks and balances more attractive to voters (and so our results that they may elect to remove checks and balances more striking).

As usual we proceed with backwards induction. Consider first the case where $\kappa = 0$ so that the rich are not able to solve their collective action problem and will not make a bribe offer. The president will veto any rents to the legislator, since transferring funds to citizens will provide him with higher utility. Realizing this, the legislator will accept zero rents. Then in equilibrium the president will indeed propose zero rents. In the same way the legislator will veto rents to the president, and realizing this the president proposes zero rents which the legislator accepts. Since there will be no rents in this case, the president proposes to use the whole budget as transfers, and the legislator will accept this. Realizing that all funds will be used as transfers to the poor, a president from the poor group will then propose the maximum tax rate $\bar{\tau}$, and the legislator will accept this. Thus when $\kappa = 0$ the solution is exactly the same as in the model in Section 2.

Consider next the case where $\kappa = 1$ so that the rich can influence policy through bribing. In contrast to the case in Section 2, the rich will now need to bribe both the president and the legislator. Thus the problem of the rich lobby can be written as

$$\max_{\{\hat{b}^P, \hat{b}^L, \hat{\tau}\}} \frac{(\theta - (\theta - \delta)\hat{\tau})\,\bar{y}}{\delta} - \frac{\hat{b}^P + \hat{b}^L}{\delta} \text{ subject to}$$

$$\alpha v\left(\hat{b}^P\right) \geq (1-\alpha)\frac{(\bar{\tau} - \hat{\tau})\,(\theta - \delta)\bar{y}}{1-\delta}$$

$$\alpha v\left(\hat{b}^L\right) \geq (1-\alpha)\frac{(\bar{\tau} - \hat{\tau})\,(\theta - \delta)\bar{y}}{1-\delta}$$

$$\hat{\tau} \geq 0.$$

Denoting the multipliers on the three constraints by λ_1, λ_2 and λ_3, the first-order conditions with respect to $\hat{b}^P$, $\hat{b}^L$ and $\hat{\tau}$ are:

$$-\frac{1}{\delta} + \lambda_1 \alpha v'\left(\hat{b}^P\right) = 0, \tag{24}$$

$$-\frac{1}{\delta} + \lambda_2 \alpha v'\left(\hat{b}^L\right) = 0, \tag{25}$$

and

$$-\frac{(\theta - \delta)\,\bar{y}}{\delta} + (\lambda_1 + \lambda_2)\,(1-\alpha)\,\frac{(\theta - \delta)\bar{y}}{1-\delta} + \lambda_3 = 0. \tag{26}$$

From (24) and (25) it follows that the participation constraints of the president and legislator holding with equality. Moreover, both participation constraints holding as equality implies that $\hat{b}^L = \hat{b}^P$, and this in turn implies $\lambda_1 = \lambda_2$. Solving for λ_1 from (24) and inserting in (26), we find that $\lambda_3 > 0$ and thus $\hat{\tau} = 0$ if

$$\frac{\alpha}{1-\alpha} v'\left(\hat{b}^P\right) > \frac{2}{1-\delta}. \tag{27}$$

Note also from the participation constraint of the president that when $\hat{\tau} = 0$, $\hat{b}^P$ must be decreasing in α, i.e., $\hat{b}^P = \hat{b}^P(\alpha)$ with $\hat{b}^{P\prime}(\alpha) < 0$. Thus the left-hand side of (27) is increasing in α, while the right-hand side does not depend on α. The following equation thus implicitly defines a unique value of α, α^{**}, such that

$$\frac{\alpha^{**}}{1-\alpha^{**}} v'\left(\hat{b}^P(\alpha^{**})\right) = \frac{2}{1-\delta}. \tag{28}$$

Note from (28) that the only change from equation (15) in the basic model is that the right-hand side of (28) is twice the right-hand side of (15). This immediately implies $\alpha^{**} > \alpha^{*}$.

Moreover, note that all the analysis in Section 2 carries over the model with checks and balances as veto powers, again with the only modification that α^{*} needs to be replaced by α^{**}. Thus we have the following proposition:

Proposition 4 *All of the results in Proposition 3 and the subsequent corollaries hold in the current model (with α^{**} replacing α^{*}).*

Multicameral Legislature

In line with Diermeier and Myerson (1999), we now allow the legislature to consist of multiple chambers, each consisting of a single legislator. Each chamber has veto and proposal powers. To highlight the implications of multiple chambers, we continue to assume that all legislators are from the poor group (this will be relaxed in subsection 3.3). In this case the voters elect a president and $h \geq 1$ chambers of the legislature. Each chamber consists of one legislator. Thus when $h = 1$ we have a unicameral legislature as above, when $h = 2$ we have a bicameral legislature, and so on. Note that h in our setting closely maps to the "hurdle factor" in Diermeier and Myerson (1999), which captures, the number of veto players that have to be bribed if policy is to be changed compared to a situation without bribing. As in Diermeier and Myerson (1999) the multicameral legislature is serial. Thus the timing is exactly as above, except that now a policy proposal has to pass through multiple chambers and can be vetoed by each of them in turn.

Consider first the case where $\kappa = 0$ so that the rich are not able to solve their collective action problem. By exactly the same logic as above it is easy to see that policy is still the same as in the basic model in Section 2.

Consider next the case where $\kappa = 1$ so that the rich can influence policy through bribing. Compared to the situation with a unicameral legislature the rich now have to bribe the president and h chambers. The maximization problem is analogous to the case with a unicameral legislature, except that now there are $1 + h$ politicians' participation constraints that have to be satisfied. Going through the same maximization as above we find that the president and all of the legislators receive the same bribe, and that $\hat{\tau} = 0$ if

$$\frac{\alpha}{1-\alpha} v'\left(\hat{b}^P\right) > \frac{1+h}{1-\delta},$$

in turn implying that the critical value of α for the tax rate to be zero is given by

$$\frac{\alpha^{***}}{1-\alpha^{***}} v'\left(\hat{b}^P(\alpha^{***})\right) = \frac{1+h}{1-\delta}.$$

This equation implies that α^{***} is increasing in the hurdle factor h. Intuitively, when there are more chambers with veto power, there will be more legislators to bribe, and this makes it more likely that the bribing proposal will include some income redistribution (since this enables lower bribes for each legislator). Also, note that except for this modification, the analysis in Section 2 still carries over to the present case with α^* replaced by α^{***}. Thus we have the following proposition:

Proposition 5 *Consider the case with a serial multicameral legislature with veto powers. Then all of the results in Proposition 3 and the subsequent corollaries still hold (with α^{***} replacing α^*).*

Thus the model with checks and balances as veto powers leads to similar insights as our basic model presented in Section 2. However, the multicameral extension discussed here also implies that a greater h, by increasing the threshold α^{***}, may make checks and balances more likely to emerge in equilibrium. This result, however, depends on the assumption that all chambers contain legislators from the poor income group. In subsection 3.3, we will see that legislative structures that also empower political minorities (here the rich minority) may paradoxically make checks and balances less likely in equilibrium because they may reduce the rents of the president even further and make him even cheaper to buy/influence.

3.2 Separation of Taxation and Spending Decisions

In this subsection, we show that our main insights are also robust to another popular way of modeling checks and balances. In particular, we follow Persson, Roland and Tabellini (1997, 2000) and assume that the presence of checks and balances corresponds to the separation of taxation and spending decisions. More specifically, the president sets the tax rate and the legislator makes all the spending decisions. In this case, we also allow for transfers targeted to each of the two groups and denote these targeted transfers by T^p and T^r, respectively, and the budget constraint is now given by

$$(1-\delta)\, T^p + \delta T^r + R^L + R^P \leq \tau \bar{y}. \tag{29}$$

Consider first the case without checks and balances and without the rich lobby, i.e., $\gamma = 0$ and $\kappa = 0$. Then, in the policy-making subgame, the president will solve the program

$$V^{P,p}\left[\gamma=0, \kappa=0\right] \equiv \max_{\{\tau, T^p, T^r, R^L, R^P\}} \alpha v\left(R^P\right) + (1-\alpha)\left((1-\tau)y^p + T^p\right),$$

subject to the government budget constraint (29). The rents to the president are determined as $R^P = R^{**}$, where R^{**} satisfies

$$\alpha v'\left(R^{**}\right) = \frac{1-\alpha}{1-\delta}. \tag{30}$$

The transfer to the poor is given by $T^p = \left(\bar{\tau}\bar{y} - R^{**}\right)/\left(1-\delta\right)$. The utility of poor agents is given by

$$U^p\left[\gamma=0, \kappa=0\right] = \frac{\left(\bar{\tau}\theta + 1 - \theta\right)\bar{y} - R^{**}}{1-\delta}. \tag{31}$$

Next, suppose that $\kappa = 1$. In this case, the rich lobby can make a bribe offer, $\left\{\hat{b}^P, \hat{\tau}, \hat{T}^p, \hat{T}^r, \hat{R}^L, \hat{R}^P\right\}$. However, for the same reason as in Section 2 we can also see that in this case the rich lobby can never get strictly higher utility by offering a bribe. There would be no offer that the rich lobby can make that would be acceptable to the politician and at the same time increase their own utility.[13]

The following proposition summarizes these results (proof in the text):

Proposition 6 *Suppose the constitution involves no checks and balances (i.e., $\gamma = 0$). Then the equilibrium policy involves $\tau = \bar{\tau}$, $R^P = R^{**}$ (as given by (30)), $R^L = 0$, $b^P = 0$, $b^L = 0$, $T^r = 0$, and $T^p = (\bar{\tau}\bar{y} - R^{**}) / (1 - \delta)$. The utility of poor agents in this case is given by (31).*

Next, suppose that there is separation of powers ($\gamma = 1$) and again start with $\kappa = 0$, so that the rich are not able to solve their collective action problem and will not make a bribe offer. In the policy-making subgame, the legislator will make the spending decisions and will solve the program

$$V^{L,p}[\tau, \gamma = 1, \kappa = 0] \equiv \max_{\{T^p, T^r, R^L, R^P\}} \alpha v\left(R^L\right) + (1-\alpha)\left((1-\tau)y^p + T^p\right),$$

subject to the government budget constraint (29) and the tax rate τ decided by the president. The solution in this case is $T^r = R^P = 0$, and

$$R^L = \min\{R^{**}, \tau\bar{y}\}. \tag{32}$$

and

$$T^p = \frac{\tau\bar{y} - R^L}{1-\delta}, \tag{33}$$

Given this the president sets the tax rate so as to maximize

$$V^{P,p}[\gamma = 1, \kappa = 0] \equiv \max_{\tau} \alpha v\left(R^P\right) + (1-\alpha)\left((1-\tau)y^p + T^p\right),$$

subject to the best response spending policy of the legislator, i.e., subject to

$$\{T^p, T^r, R^L, R^P\} \in \arg\max V^{L,p}[\tau, \gamma = 1, \kappa = 0].$$

Since separation of powers gives $R^P = 0$, we have that

$$\tau = \arg\max_{\tau'} \left[\alpha v(0) + (1-\alpha)\left((1-\tau')y^p + T^p\right)\right] = \arg\max_{\tau'} U^p.$$

Therefore, in this case the president will set the tax rate so as to maximize utility of the poor.

The president realizes that tax income in excess of R^{**} will be transferred to the poor while none of the tax income will end up as rents for the president. Thus compared to the case without checks and balances it is now less tempting for the president to tax. The income of the poor if

[13] They could make an offer $\left\{\hat{b}^P, \hat{\tau}, \hat{T}^p, \hat{T}^r, \hat{R}^L, \hat{R}^P\right\}$ that either would have $\hat{b}^P = \hat{T}^r > 0$ and would leave exactly the same level of transfers to the poor and rents plus bribes to the president, or the rich could make an offer that would have a lower tax rate and less transfers to the poor, and where the amount of transfers to the poor is reduced by exactly the same amount as they save in taxes. All such offers are payoff equivalent for all parties and without loss of any generality, we set $\hat{b}^P = 0$.

the tax rate is set to zero is $(1-\theta)\bar{y}/(1-\delta)$, while the income of the poor if the tax rate is set so as to maximize the income transfers to the poor is given by (31). The president sets the tax rate to zero or $\bar{\tau}$ depending on what maximizes the income of the poor. If R^{**} is greater than $\theta\bar{\tau}\bar{y}$, then the tax rate is set to zero, while if R^{**} is less than $\theta\bar{\tau}\bar{y}$ the tax rate is set to $\bar{\tau}$.

Note from (30) that $R^{**} = R^{**}(\alpha)$ and let α^H be defined by

$$R^{**}(\alpha^H) = \theta\bar{\tau}\bar{y},$$

which inserting for $R^{**}(\alpha^H)$ in (30) yields

$$\alpha^H = \frac{1}{1+(1-\delta)v'(\theta\bar{\tau}\bar{y})}. \tag{34}$$

Then when $\alpha < \alpha^H$ the weight the legislator puts on his own utility is sufficiently small that the president still adopts the maximum tax rate $\tau = \bar{\tau}$, while when $\alpha > \alpha^H$ the income of the poor is maximized by setting $\tau = 0$. In this latter case when $\tau = 0$ it follows from the government budget constraint (29) that under checks and balances then when $\kappa = 0$ policy is $T^p = T^r = R^P = R^L = 0$.

The situation when there are checks and balances and the rich lobby is organized (i.e., $\gamma = 1$ and $\kappa = 1$) is a little more involved. In this case, the rich lobby will make bribe offers $\left\{\hat{b}^L, \hat{T}^p, \hat{T}^r, \hat{R}^L, \hat{R}^P\right\}$ and $\left\{\hat{b}^P, \hat{\tau}\right\}$ to the legislator and the president, respectively. For the politicians to accept these bribe offers they must satisfy the participation constraints

$$V^{L,p}\left(\hat{b}^L, \hat{\tau}, \hat{T}^p, \hat{T}^r, \hat{R}^L, \hat{R}^P\right) \geq V^{L,p}\left[\gamma = 1, \kappa = 0\right],$$

and

$$V^{P,p}\left(\hat{b}^P, \hat{\tau}, \hat{T}^p, \hat{T}^r, \hat{R}^L, \hat{R}^P\right) \geq V^{P,p}\left[\gamma = 1, \kappa = 0\right].$$

Consider first the case where $\alpha < \alpha^H$. Here the tax rate without bribing is set at its maximum $\tau = \bar{\tau}$, and the legislator obtains his bliss point policy with positive rents and transfers to the poor. Thus the rich lobby has nothing to offer him that they find it worth paying for. However, in this case the president can be bribed. Since checks and balances means no rents for the president, he becomes cheap to buy for the rich elite. The rich lobby can offer him rents in exchange for a lower tax rate, taking into account that the legislator will set policy according to (33) and (32). Since when $R^P = 0$ the marginal utility of bribes is higher than the president's marginal utility of transfers the poor, it will be beneficial for the rich elite to bribe and induce the president to set a tax rate lower than $\tau = \bar{\tau}$. But for this reason of course, it is already clear that a constitution with checks and balances can never be an equilibrium when $\alpha < \alpha^H$; in this case the poor prefer $\tau = \bar{\tau}$ which they will always get when the constitution does not involve checks and balances. Thus in this case, checks and balances simply make the president too cheap to buy for the rich elite, in turn limiting redistribution to the poor. Since they are straightforward, we do not provide details of this case.

When $\alpha > \alpha^H$ the tax rate without bribing is set to zero. This leaves both the president and the legislator with zero rents, making both of them cheap to buy for the rich elite. The rich elite can then bribe politicians into redistributing income to themselves. The only remaining question is to determine the cheapest way for the rich elite to capture the politicians. Intuitively, when there is no bribing and rents are zero, the marginal utility of rents for politicians is relatively high. As a consequence, bribing politicians will always imply positive direct bribes. Moreover, if politicians put sufficiently high weight, $1-\alpha$, on the utility of the members of their group and if income distribution is not too unequal, then the bribing proposal will also contain direct income transfers to the poor. In the converse case where α is high and income distribution is relatively unequal, it is more efficient for the rich elite to capture politicians by offering direct bribes rather than income transfers to the poor. This latter result is particularly interesting because it implies that when inequality is high, which is when we would typically expect greater redistribution, the poor may in fact receive no redistribution. Intuitively, this is because greater inequality also increases the willingness of the rich to use bribes to reduce redistribution. The details of the analysis establishing these results are provided in the Appendix. The next proposition summarizes these results.

Proposition 7 *Suppose $\gamma = 1$. Let α^H be given as in (34).*

1. *Suppose that $\alpha > \alpha^H$.*

   (a) *When $\kappa = 0$ so that there is no bribing, the equilibrium involves $\tau = 0$, $R^P = 0$, $R^L = 0$, $T^p = 0$, and $T^r = 0$.*

   (b) *When $\kappa = 1$, there exist θ^* and α_L such that:*

      i. *If $\theta > \theta^*$ or $\alpha > \alpha_L$, then $\tau = \bar{\tau}$, $R^P = 0$, $R^L = 0$, $b^P = b^L > 0$, $T^p = 0$, and $T^r > 0$.*

      ii. *If $\theta < \theta^*$ and $\alpha < \alpha_L$, then $\tau = \bar{\tau}$, $R^P = 0$, $R^L = 0$, $b^P = b^L = b^*$, with b^* determined by $v'(b^*) = 2(1-\alpha)/\alpha(1-\delta)$, $T^p > 0$, and $T^r > 0$.*

   Taking into account that the probability the rich can solve their collective action problem and bribe politicians is q, we have that:

   If $\theta > \theta^*$ or $\alpha > \alpha_L$, then the expected utility of poor agents is

$$U^p[\gamma = 1] = \frac{(1-\theta)(1-q\bar{\tau})}{1-\delta}\bar{y}. \tag{35}$$

   If $\theta < \theta^*$ and $\alpha < \alpha_L$, then the expected utility of poor agents is

$$U^p[\gamma = 1] = \frac{1-\theta}{1-\delta}\bar{y} - \frac{q}{1-\delta}\left(\frac{2v(b^*)}{v'(b^*)}\right). \tag{36}$$

2. *Suppose that $\alpha < \alpha^H$.*

   (a) *When $\kappa = 0$, the equilibrium involves $\tau = \bar{\tau}$, $R^P = 0$, $R^L = R^{**}$, $T^p = (\bar{\tau}\bar{y} - R^{**})/(1-\delta)$, and $T^r = 0$.*

(b) *When $\kappa = 1$, the equilibrium involves $\tau < \bar{\tau}$, $R^P = 0$, $R^L \leq R^{**}$, $b^P > 0$, $b^L = 0$, $T^p = (\tau\bar{y} - R^L)/(1-\delta)$, and $T^r = 0$.*

Taking into account that $q \geq 0$ we have that when $\alpha < \alpha^H$ then $U^p[\gamma = 1] \leq U^p[\gamma = 0]$.

When politicians put sufficiently high weight on rents, i.e., when $\alpha > \alpha^H$, checks and balances, in the absence of bribery, lead to an equilibrium in which they obtain zero rents. This makes them relatively cheap to bribe and influence. In fact, since we now have targeted transfers, the rich elite can bribe the politicians not only to stop redistribution away from themselves but also to receive direct transfers (and in fact this is more likely when inequality is greater). On the other hand, when politicians put sufficiently high weight on the utility of their group, i.e., when $\alpha < \alpha^H$, there will be maximum taxes and the legislator will obtain rents. For this reason the rich elite cannot successfully bribe the legislator. Nevertheless the president still does not receive significant rents and is cheap to bribe and influence. Thus, when they are able to solve their collective action problem, the rich elite can bribe the president to lower the tax rate.

Given the above characterization, the outcome in the referendum on checks and balances is straightforward to determine.

Proposition 8 *Let α^H be as in (34) and θ^* and α_L as in Proposition 7.*

1. *Suppose that $\alpha > \alpha^H$.*

   (a) *When $\theta > \theta^*$ or $\alpha \geq \alpha_L$, the constitution will involve no checks and balances provided that*
$$q > \frac{R^{**} - \bar{\tau}\theta\bar{y}}{(1-\theta)\bar{\tau}\bar{y}}, \tag{37}$$
   and it will involve checks and balances if the converse inequality holds.

   (b) *When $\theta < \theta^*$ and $\alpha < \alpha_L$, the constitution will involve no checks and balances provided that*
$$q > \frac{(R^{**} - \bar{\tau}\theta\bar{y})v'(b^*)}{2v(b^*)}, \tag{38}$$
   and it will involve checks and balances if the converse inequality holds.

2. *Suppose that $\alpha < \alpha^H$. Then the constitution will never involve checks and balances.*

Proof. To see part 1, note that an individual from the poor income group prefers a constitution without checks and balances when $U^p[\gamma = 0] > U^p[\gamma = 1]$. When $\theta > \theta^*$ or $\alpha \geq \alpha_L$ part 1.(a) follows from (31) and (35). When $\theta < \theta^*$ and $\alpha < \alpha_L$ part 1.(b) follows from (31) and (36). Part 2 follows since in this case poor voters prefer the president to set $\tau = \bar{\tau}$ in order to get income redistribution. In the case without checks and balances the president always sets $\tau = \bar{\tau}$, while with checks and balances with probability q the rich lobby bribe him into setting a lower tax rate. ■

This proposition shows that when checks and balances take the form of the separation of taxation and spending, if politicians sufficiently high weight on the utility of their group ($\alpha < \alpha^H$), poor voters always prefer a constitution without checks and balances. The intuition is again similar: with concentrated power the president becomes too expensive to buy for the rich elite, which is good for the poor provided that the president puts a sufficiently high weight on their utility relative to his own rents. In contrast, when the constitution includes checks and balances, the president is weaker, and this allows the rich elite to bribe and obtain policies in their favor. By inspection of (34), we see that the condition $\alpha < \alpha^H$ is more likely to be satisfied when income distribution is unequal (θ high) and economic activity is easily taxable ($\bar{\tau}$ high). This implies that in more unequal societies and in societies where income is easier to tax, poor voters are more likely to opt for a constitution without checks and balances, even when politicians put more weight on their own rents.

The next two corollaries are again straightforward implications of our main result:

Corollary 5 *Suppose that $\alpha > \alpha^H$. When $q = 0$, so that the rich are never able to bribe politicians, then the constitution will always include checks and balances.*

Proof. This immediately follows by noting that the when $q = 0$ the inequalities in (37) and (38) reduce to $\alpha < \alpha^H$, which is a contradiction. ■

When politicians can never be captured because the elite are not able to solve the collective action problem, the constitution will always involve checks and balances. This highlights again that the reason why the majority may prefer a constitution without checks and balances is because of the interaction between politician behavior and bribing by the rich lobby.

Similarly, a second corollary to Proposition 8 is that:

Corollary 6 *Suppose that $\alpha > \alpha^H$ and $q > 0$. The comparative statics with respect to q, θ and $\bar{\tau}$ from the basic model continue to hold in the model with separation of taxing and spending. Thus a constitution without checks and balances is more likely when q is greater, when θ is higher, and when $\bar{\tau}$ is higher.*

Proof. The comparative statics with respect to q follow as the left-hand sides of both (37) and (38) are increasing in q while the right-hand sides are independent of q. The comparative statics with respect to θ follow as the left-hand sides of (37) and (38) are independent of θ while the right-hand sides are decreasing in θ. The comparative statics with respect to $\bar{\tau}$ follow as the left-hand sides of (37) and (38) are independent of $\bar{\tau}$ while the right-hand sides are decreasing in $\bar{\tau}$. ■

Moreover, since in this case a greater q may tilt the equilibrium constitution from one that features checks and balances to one that does not, we again have that the political power and utility of the rich may in fact become lower if the rich become better at solving the collective action problem (in the sense that q increases).

3.3 Political Minorities

In the model presented in the previous subsection, checks and balances is a way of sharing political power between the president and the legislature. However, as the poor citizens constitute a majority and select both the legislator and the president, such checks and balances do not transfer political power from the majority group to the minority group. In many political systems even minority groups get some political power in the legislature. We now briefly consider an extension to allow for this possibility. The main result is the following paradoxical finding: greater power sharing in the legislature can backfire and lead to an equilibrium with fewer checks on the president (which is thus worse for the political minority, the rich in this case).

To capture the effect of the political power of the minority, we now assume that the legislature consists of two (or many) elected politicians where one (group) represents the poor voters and the other represents the rich.[14] We assume that there is a probability $1-\eta$ that a legislator from the poor is selected to decide spending and a probability η that a legislator from the rich is selected. The timing of events is the same as above, except that now at stage 3 where uncertainty is revealed not only whether or not the rich can bribe becomes common knowledge, but also the identity of the spending legislator (which was not uncertain in the model above).

It is straightforward to see that parts 1.(a) and 2 of Proposition 8 are unaffected. Thus the only situation where the extension of the model into a multi-member legislature modifies the analysis and the results is when $\theta < \theta^*$ and $\alpha < \alpha_L$ and we are in part 1.(b) of Proposition 8. This is the case we focus on in this subsection, thus assuming throughout that $\theta < \theta^*$ and $\alpha < \alpha_L$, which implies that under checks and balances the bribing equilibrium with a legislator and a president from the poor involves positive income transfers to the poor.

Now consider the situation with a legislator from the rich. In this case, when $\kappa = 1$ (i.e., when it is able to offer bribes), the rich lobby will prefer to include no or less income transfers to the poor in the bribing proposal than in the case where it was facing a legislator from the poor. Intuitively, this is because transferring resources to the poor is now less attractive for the rich lobby as these transfers only benefit one of the politicians it is bribing. In the Appendix, we characterize the optimal bribing proposal for the rich in this case and the expected utility of the poor from a constitution with and without checks and balances (and checks and balances corresponding to a multi-member legislature). This characterization immediately implies:

Proposition 9 *Suppose there is a multi-member legislature, $\gamma = 1$, $\theta < \theta^*$ and $\alpha < \alpha_L$. Then there exists $\alpha_M < \alpha_L$ such that:*

1. *when $\alpha > \alpha_M$, the constitution will involve no checks and balances provided that*

$$q > \frac{R^{**} - \bar{\tau}\theta\bar{y}}{\left((1-\eta)\frac{2v(b^*)}{v'(b^*)} + \eta(1-\theta)\bar{\tau}\bar{y}\right)}, \tag{39}$$

[14] The implications of providing greater power/voice to political minorities can also be studied, with similar results, using a structure similar to Diermeier and Myerson (1999) or equivalently in the context of the veto player model introduced in subsection 3.1.

and it will involve checks and balances if the converse inequality holds;

2. *when $\alpha < \alpha_M$, the constitution will involve no checks and balances provided that*

$$q > \frac{R^{**} - \bar{\tau}\theta\bar{y}}{\left((1-\eta)\frac{2v(b^*)}{v'(b^*)} + \eta\frac{v(R^{**})}{v'(R^{**})}\right)}, \tag{40}$$

and it will involve checks and balances if the converse inequality holds.

Proof. See the Appendix. ■

Naturally, when $\eta = 0$, (39) and (40) both reduce to (38), and we obtain the same results as in the previous subsection.

In addition, when $q = 0$ so that the rich are never able to bribe politicians, Proposition 9 implies that the constitution will always include checks and balances. Moreover, it is straightforward to verify that all the comparative statics with respect to q, θ and $\bar{\tau}$ from the single-member legislature case continue to apply in the case with a multi-member legislature.

The more interesting result from Proposition 9 concerns the comparative statics with respect to η, which are provided in the next corollary.

Corollary 7 *A greater η, i.e., granting greater power to the political minority in the legislature, makes checks and balances less likely.*

Proof. This follows as the left-hand sides of (39) and (40) are independent of η, while the denominators on the right-hand sides of (39) and (40) are increasing in η (because as can be verified in the Appendix in (39), $(1-\theta)\bar{\tau}\bar{y}v'(b^*) > 2v(b^*)$, and in (40), $v(R^{**})\,v'(b^*) > 2v(b^*)v'(R^{**})$). ■

This corollary thus implies that efforts to protect the rights of the rich elite by giving them greater representation in the legislature, a strategy often adopted by many newly independent countries, may actually backfire and lead to lower checks and balances in equilibrium. This is because increasing the representation of the rich under checks and balances makes political corruption even more costly for the poor and discourages them from choosing checks and balances in the first place. When this is the case granting more political power to the minority makes them less powerful and results in policies providing them with lower utility.

3.4 Relaxing Quasi-Linearity

We now explore the solution of the model in Section 2 when the utility function of politicians is no longer quasi-linear. In particular, suppose that the utility function of a politician j from income group $i \in \{p, r\}$ is given by

$$V^{j,i} = \left(R^j + b^j + r\right)^{\beta} \left(U^i\right)^{1-\beta}, \tag{41}$$

where $\beta \in (0, 1)$, and $r > 0$ denotes the ego rents of becoming an elected politician. With $r > 0$ the utility function is defined and well behaved also in cases where $R^j + b^j = 0$.

To facilitate comparison with the model in Section 2 that does not include ego rents, in the text we simplify by focusing on the case where $r \to 0$, so that for simplicity the ego rent term vanishes. Nevertheless, the presence of this vanishing term implies that even when $R^j = b^j = 0$ the utility function has standard properties. We show the solution in the slightly more complicated case when r can take any value in the Appendix.

We first investigate the case where the constitution does not involve checks and balances, i.e. $\gamma = 0$.

Consider first the case in which $\kappa = 0$ so that the rich are not able to solve their collective action problem and will not make a bribe offer. Then, in the policy-making subgame, the president will solve the program

$$V^{P,p}[\gamma = 0, \kappa = 0] \equiv \max_{\{\tau, T, R^L, R^P\}} \left(R^P + r\right)^\beta ((1-\tau)y^p + T)^{1-\beta}, \tag{42}$$

subject to the government budget constraint (2). This problem has a unique solution where incomes are taxed at the maximum rate, with all the proceeds spent on rents to the president and transfers to the poor (so that government budget constraint (2) holds as equality).

Next, suppose that $\kappa = 1$. Again the rich lobby can never strictly increase its utility by offering a bribe that the president will accept. Any such offer is payoff equivalent for all parties and without loss of any generality we set $\hat{b}^P = 0$. The following proposition summarizes the case where the constitution does not have checks and balances:

Proposition 10 *Suppose $\gamma = 0$. Let $r \to 0$ and*

$$\beta^H = \frac{\bar{\tau}(1-\delta)}{1-\theta+(\theta-\delta)\bar{\tau}}. \tag{43}$$

Then the equilibrium policy always has $\tau = \bar{\tau}$. Moreover:

1. *if $\beta > \beta^H$, then $T = 0$. The utility of poor agents in this case is $U^p[\gamma = 0] = (1-\theta)(1-\bar{\tau})\bar{y}/(1-\delta)$;*
2. *if $\beta < \beta^H$, then transfers are given by*

$$T = (\bar{\tau}(1-\delta) - \beta(1-\theta+(\theta-\delta)\bar{\tau}))\frac{\bar{y}}{1-\delta}.$$

The utility of poor agents in this case is

$$U^p[\gamma = 0] = \frac{1-\beta}{1-\delta}(1-\theta+(\theta-\delta)\bar{\tau})\,\bar{y}. \tag{44}$$

Proof. This proposition follows by letting $r \to 0$ in the general case where r can take any value shown in Proposition 14 in the Appendix. ■

Consider next the case where the constitution involves checks and balances, i.e. $\gamma = 1$. When $\kappa = 0$ then for the same reason as in Section 2 the legislator will ensure there are no rents to the president, which in turn has the implication that the president decides policy so as to maximize the utility of the poor, i.e. the maximum tax rate is imposed, $T = \bar{\tau}\bar{y}$, and the utility of the poor is given by

$$U^p[\gamma = 1, \kappa = 0] = \frac{(1 - \theta + (\theta - \delta)\bar{\tau})\bar{y}}{1 - \delta}.$$

On the other hand when $\kappa = 1$ the rich lobby can successfully bribe the president. In particular as $r \to 0$, the rich lobby induce the president to set the tax rate to zero, which in turn implies that the poor will get no redistribution. In this case we have:

Proposition 11 *Suppose $\gamma = 1$ and let $r \to 0$.*

1. *When $\kappa = 0$ so that the rich lobby is not organized and there is no bribing, the equilibrium involves $\tau = \bar{\tau}$, $R^P = 0$, $R^L = 0$, and $T = \bar{\tau}\bar{y}$.*
2. *When $\kappa = 1$ so that the rich lobby is organized and there is bribing, then $\tau = 0$, $R^P = 0$, $R^L = 0$, $b^P > 0$, $b^L = 0$, and $T = 0$.*

The expected utility of poor agents is given by

$$U^p[\gamma = 1] = \frac{(1 - \theta)\,\bar{y}}{1 - \delta} + (1 - q)\frac{(\theta - \delta)\bar{\tau}\bar{y}}{1 - \delta}. \tag{45}$$

Proof. This result follows by letting $r \to 0$ in the general case where r can take any value shown in Proposition 15 in the Appendix. ■

When poor voters vote to decide if the constitution should involve checks and balances or not we then have:

Proposition 12 *Let $r \to 0$.*

1. *When $\beta > \beta^H$ the constitution will always involve checks and balances.*
2. *When $\beta < \beta^H$ then the constitution will involve no checks and balances if*

$$q > \frac{\beta\,(1 - \theta + (\theta - \delta)\bar{\tau})}{(\theta - \delta)\bar{\tau}}, \tag{46}$$

and it will involve checks and balances if the converse inequality holds.

A greater q (a higher likelihood of the rich lobby being organized) makes a constitution without checks and balances more likely.

Proof. Part 1 follows as in this case under no checks and balances the poor pay maximum taxes but get no transfers, while under checks and balances there is a positive probability they will receive transfers. Part 2 follows after simple calculation by comparing (44) with (45). The effect of q in part 2 follows as the left-hand side of (46) is increasing in q while the right-hand side of this equation is independent of q. ■

It is easy to verify that also in this case the constitution will always involve checks and balances when $q = 0$, and that all the comparative statics with respect to q, θ and $\bar{\tau}$ from the basic model is still valid.

Note finally that, in contrast to the basic model in Section 2, it is no longer the case that income distribution is irrelevant for the decision to dismantle checks and balances when politicians put a low weight on their own rents.

4 Conclusion

In many weakly-institutionalized democracies, particularly in Latin America, voters have recently dismantled constitutional checks and balances that are commonly thought to limit presidential rents and abuses of power. In this paper, we develop an equilibrium model of checks and balances in which voters may vote for the removal of such constraints on presidential power. Our main argument is simple: checks and balances are indeed effective (at least partially) in reducing presidential discretion and prevent policies that are not in line with the interests of the majority of the citizens. This naturally reduces presidential rents, which is however a double-edged sword. By reducing presidential rents, checks and balances make it cheaper to bribe or influence politicians through non-electoral means such as lobbying or bribes. In weakly-institutionalized polities where such non-electoral influences, particularly by the better organized elite, are a major concern, voters may prefer a political system without checks and balances as a way of insulating politicians from these influences. In our theory, therefore, when voters choose to insulate politicians from these influences, they will dismantle checks and balances and will (implicitly) accept a certain amount of politician rent or pet policies by politicians that they do not like in return for redistribution.

Though simple, our model leads to a number of interesting comparative statics. In particular, we show that checks and balances are less likely to emerge when politician rents are low in equilibrium; when the elite are better organized and are more likely to be able to influence or bribe politicians; and when inequality and potential taxes are high (which makes redistribution more valuable to the majority).

To illustrate the main insight in this paper, that checks and balances by reducing politician rents also make them easier to bribe by the better organized rich elite, we start with a very simple model of checks and balances in which the legislature can control the distribution of rents between itself and the president, forcing the president to choose zero rents and use all tax revenues for redistribution. We show that the same insights apply with different models of checks and balances. In particular, we analyze both a model in which the presence of checks and balances implies veto power by the president and the legislature related to the view in Diermeier and Myerson (1999) and a variant of the model proposed by Persson, Roland and Tabellini (1997, 2000), where separation of powers (checks and balances) corresponds to the separation of taxation and spending decisions. With both alternatives, it continues to be the case that checks and balances, again by making politicians cheaper to bribe, are potentially costly to the majority, is valid under different ways of modeling the form of checks and balances. We also show how providing representation to political minorities (here the rich elite) in the legislature, paradoxically, may make the rich worse off because it encourages dismantlement of checks and balances.

We view our paper as only one facet of the paradoxes of democratic politics under weak institutions. The more general message is that in such environments, political conflict can lead to the opposite of the results that we are used to from environments with strong institutions. Thus while voters always prefer checks and balances under strong institutions, they may prefer the absence of checks and balances under weak institutions. Similarly, perhaps, under weak institutions, voters may vote for incumbents that have chosen policies that are not in line with their preferences because this may be viewed as a signal that politicians are independent (as argued in Acemoglu, Egorov and Sonin, 2011). Furthermore, under weak institutions political competition can lead to a situation in which the group currently holding power may fear a power switch and as a result, entirely fail to monitor its leaders (e.g., Padro-i-Miquel, 2007) and a leveling of the democratic playing field may lead to worse outcomes (e.g., Acemoglu and Robinson, 2008). We believe that further analysis of how, under weak institutions, political competition works and may get distorted, and perhaps how it can be designed so that it does not, is a fruitful area of future research.

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Appendix

Appendix to subsection 3.2

In this Appendix we provide analytical details behind Part 1.(b) in Proposition 7. Recall that the rich lobby now can propose a bribe for policy in all policy dimensions and $\alpha > \alpha_H$. To simplify the exposition, note also that for any combination of rents R^j and bribes b^j, both politicians and all other agents just care about sum of these two, and thus without loss of generality we can set $R^P = R^L = 0$, so that all payments to politicians are in the form of bribes. Furthermore, without loss of any generality we set $\tau = \bar{\tau}$ so that if an income group is proposed to get higher income this is through targeted transfers. Again, note that the budget constraint will be satisfied with equality as the rich lobby can always increase their utility by proposing unused funds as transfers to themselves. Inserting from the budget constraint in the utility of the rich that $\hat{T}^r = (\bar{\tau}\bar{y} - (1-\delta)\hat{T}^p)/\delta$, the rich lobby then solves the program

$$\max_{\{\hat{b}^L, \hat{b}^P, \hat{T}^p\}} (1-\bar{\tau})\,y^r - \frac{\hat{b}^L + \hat{b}^P}{\delta} + \frac{\bar{\tau}\bar{y} - (1-\delta)\,\hat{T}^p}{\delta} \text{ subject to} \tag{A-1}$$

$$\alpha v\left(\hat{b}^L\right) + (1-\alpha)\left((1-\bar{\tau})y^p + \hat{T}^p\right) \geq (1-\alpha)\,y^p$$
$$\alpha v\left(\hat{b}^P\right) + (1-\alpha)\left((1-\bar{\tau})y^p + \hat{T}^p\right) \geq (1-\alpha)\,y^p$$
$$\hat{b}^L \geq 0$$
$$\hat{b}^P \geq 0$$
$$\hat{T}^p \geq 0,$$

Denoting the multipliers on the five constraints in (A-1) by λ_1, λ_2, λ_3, λ_4 and λ_5, the first-order conditions are:

$$-\frac{1}{\delta} + \lambda_1 \alpha v'\left(\hat{b}^L\right) + \lambda_3 = 0 \tag{A-2}$$

$$-\frac{1}{\delta} + \lambda_2 \alpha v'\left(\hat{b}^P\right) + \lambda_4 = 0 \tag{A-3}$$

$$-\frac{(1-\delta)}{\delta} + \lambda_1(1-\alpha) + \lambda_2(1-\alpha) + \lambda_5 = 0. \tag{A-4}$$

From the participation constraints of the politicians it follows immediately that the non-negative constraints on bribes and transfers to the poor can not all be binding at once. Thus, we have three possible cases.

Case (1). If $\lambda_3, \lambda_4 > 0$ then $\hat{b}^L = \hat{b}^P = 0$, in which case $\lambda_5 = 0$ so that $\hat{T}^p > 0$. Thus in this case, there are no bribes.

Case (2). If $\lambda_5 > 0$ then $\hat{T}^p = 0$, in which case $\lambda_3 = \lambda_4 = 0$ so $\hat{b}^L, \hat{b}^P > 0$. We note from (A-2) and (A-3) that λ_1 and λ_2 are both positive, implying that the participation constraints of both politicians are satisfied with equality. Furthermore, both participation constraints satisfied with equality implies that $\hat{b}^L = \hat{b}^P$, and thus that $\lambda_1 = \lambda_2$. From (A-2) we find

$$\lambda_1 = \frac{1}{\delta \alpha v'\left(\hat{b}^L\right)}.$$

Combining this with (A-4), we obtain

$$\lambda_5 = \frac{1-\delta}{\delta} - \frac{2(1-\alpha)}{\delta\alpha v'\left(\hat{b}^L\right)}.$$

Thus the condition for $\lambda_5 > 0$ reduces to

$$v'\left(\hat{b}^L\right) > \frac{2(1-\alpha)}{\alpha\,(1-\delta)}. \tag{A-5}$$

From the participation constraint of the legislator holding with equality, $\hat{b}^L$ is obtained as

$$\alpha v\left(\hat{b}^L\right) + (1-\alpha)\,(1-\bar{\tau})y^p = (1-\alpha)\,y^p,$$

which is equivalent to

$$\alpha v\left(\hat{b}^L\right) = \frac{(1-\alpha)\,(1-\theta)\bar{\tau}\bar{y}}{1-\delta}. \tag{A-6}$$

Since in this case $\hat{b}^L$ is decreasing in α we have that $\hat{b}^L = \hat{b}^L(\alpha)$ with $\hat{b}^{L\prime}(\alpha) < 0$. Combining (A-5) and (A-6), the condition for $\lambda_5 > 0$ reduces to

$$\frac{v'\left(\hat{b}^L(\alpha)\right)}{v\left(\hat{b}^L(\alpha)\right)} > \frac{2}{(1-\theta)\bar{\tau}\bar{y}}. \tag{A-7}$$

The left-hand side of this condition is increasing in α, while the right-hand side is independent of α. The following equation thus implicitly defines a critical value of α, denoted by α_L:

$$\frac{v'\left(\hat{b}^L(\alpha_L)\right)}{v\left(\hat{b}^L(\alpha_L)\right)} = \frac{2}{(1-\theta)\bar{\tau}\bar{y}}. \tag{A-8}$$

Substituting for $v\left(\hat{b}^L(\alpha_L)\right)$ from (A-6) we find

$$\alpha_L = \frac{1}{1+\frac{1}{2}(1-\delta)v'\left(\hat{b}^L(\alpha_L)\right)}. \tag{A-9}$$

Note from (A-6) that $\hat{b}^L(\alpha_L)$ is decreasing in θ and that as θ approaches one the bribe approaches zero. Thus from (A-9) α_L is decreasing in θ and approaches zero as θ approaches one.

Recall that we are focusing on the case where $\alpha > \alpha^H$. Thus if $\alpha^H > \alpha_L$ then the condition for $\lambda_5 > 0$ is always satisfied. From (34) and (A-9), $\alpha^H > \alpha_L$ is equivalent to

$$v'\left(\hat{b}^L(\alpha_L)\right) > 2v'(\theta\bar{\tau}\bar{y}),$$

which is always satisfied provided that θ is sufficiently high, i.e., provided that the distribution of income is sufficiently unequal (this follows since the right-hand side is decreasing in θ while the left-hand side is increasing in θ and approaches infinity as θ approaches zero). Let θ^* be defined by

$$v'\left(\hat{b}^L(\alpha_L)\right) = 2v'(\theta^*\bar{\tau}\bar{y}).$$

Thus when $\theta > \theta^*$ then $\lambda_5 > 0$ and $\hat{T}^p = 0$. When $\theta < \theta^*$ then $\lambda_5 > 0$ and $\hat{T}^p = 0$ only when $\alpha > \alpha_L$. In these cases the bribing proposal contains no income transfers to the poor, only bribes to the politicians.

Finally in this case, it can be verified that the participation constraint of the rich elite is satisfied with strict inequality. To see this, observe that the rich are strictly better off when $(1-\bar{\tau})\, y^r - 2\hat{b}^L/\delta + \bar{\tau}\bar{y}/\delta > y^r$, which is equivalent to $(1-\theta)\bar{\tau}\bar{y} > 2\hat{b}^L$. At the same time we know from (A-7) that

$$(1-\theta)\bar{\tau}\bar{y} > \frac{2v\left(\hat{b}^L\right)}{v'\left(\hat{b}^L\right)}.$$

Thus the participation constraint must hold provided that

$$v\left(\hat{b}^L\right) > \hat{b}^L v'\left(\hat{b}^L\right), \tag{A-10}$$

which is always satisfied in light of the strict concavity of the v function.

Case (3). If $\lambda_3 = \lambda_4 = \lambda_5 = 0$, then $\hat{b}^L, \hat{b}^P, \hat{T}^p > 0$. From (A-2), (A-3) and (A-4) we then find

$$v'\left(\hat{b}^L\right) = \frac{2(1-\alpha)}{\alpha\,(1-\delta)}, \tag{A-11}$$

which determines $\hat{b}^L = \hat{b}^L(\alpha) \equiv b^*$ with $\hat{b}^{L\prime}(\alpha) > 0$. Thus note that in this case $\hat{b}^L$ is increasing in α.

From the participation constraint of the legislator satisfied with equality, $\hat{T}^p$ is given by

$$\alpha v\left(\hat{b}^L\right) + (1-\alpha)\left((1-\bar{\tau})y^p + \hat{T}^p\right) = (1-\alpha)\, y^p.$$

This implies

$$\hat{T}^p = \frac{(1-\theta)\bar{\tau}\bar{y}}{1-\delta} - \frac{\alpha v\left(\hat{b}^L\right)}{1-\alpha}. \tag{A-12}$$

Combining this with (A-11), we obtain

$$\hat{T}^p = \frac{1}{1-\delta}\left((1-\theta)\bar{\tau}\bar{y} - \frac{2v\left(\hat{b}^L(\alpha)\right)}{v'\left(\hat{b}^L(\alpha)\right)}\right), \tag{A-13}$$

which is positive if and only if $\alpha < \alpha_L$ (which can be verified from (A-8) and taking into account that in this case $\hat{b}^{L\prime}(\alpha) > 0$).

It now only remains to show that the participation constraint of the rich elite is satisfied also in this case. To see this, note that the participation constraint in this case is $(1-\bar{\tau})\, y^r - 2\hat{b}^L/\delta + (\bar{\tau}\bar{y} - (1-\delta)\,\hat{T}^p)/\delta > y^r$, which is equivalent to $(1-\theta)\bar{\tau}\bar{y} > 2\hat{b}^L + (1-\delta)\,\hat{T}^p$. Inserting from (A-13) we again get (A-10), which is always satisfied.

To summarize, when $\alpha > \alpha^H$, there are two possible scenarios, corresponding to parts (i) and (ii) in part 1.(b) of Proposition 7, respectively:

i. If $\theta > \theta^*$ or $\alpha > \alpha_L$, then there will be bribing with positive bribes and no transfers to the poor.

ii. If $\theta < \theta^*$ and $\alpha < \alpha_L$, then there will be bribing with positive bribes and positive transfers to the poor.

Appendix to subsection 3.3

In this appendix, we characterize the equilibrium under checks and balances with a multi-member legislatures, focusing on the case where $\theta < \theta^*$ and $\alpha < \alpha_L$.

The utility of the poor voters when the constitution does not include checks and balances is given by (31). However, now under checks and balances, with probability η the legislator making the spending decisions represents the rich elite. Policy in the case without bribery is not affected, as the tax rate in this case is still zero. But when politicians can be bribed and when the legislator is from the rich, then the equilibrium is different than in the case with a legislator from the poor. This is because, as we now show, making an offer including transfers to the poor becomes less valuable to the rich elite, as now this only increases the utility of the president and not of the legislator.

Let us focus on the case where the legislator originates from the rich (while the president originates from the poor). The rich lobby can again propose a bribe, and again without loss of generality, we can set $R^P = R^L = 0$, and $\tau = \bar{\tau}$. Furthermore, if the rich make a bribing proposal (that gives themselves greater utility), they can always get the legislator from the rich to accept this as the participation constraint of the rich legislator is given by

$$\alpha v\left(\hat{b}^L\right) + (1-\alpha)\left((1-\bar{\tau})\,y^r - \frac{\hat{b}^L + \hat{b}^P}{\delta} + \frac{\bar{\tau}\bar{y} - (1-\delta)\,\hat{T}^p}{\delta}\right) \geq (1-\alpha)\,y^r,$$

which holds with strict inequality even when $\hat{b}^L = 0$ as long as the rich are obtaining greater utility with this proposal than without. Thus $\hat{b}^L = 0$ and the rich lobby solves the program

$$\begin{aligned} &\max_{\{\hat{b}^P,\hat{T}^p\}} (1-\bar{\tau})\,y^r - \frac{\hat{b}^P}{\delta} + \frac{\bar{\tau}\bar{y} - (1-\delta)\,\hat{T}^p}{\delta} \text{ subject to} \\ &\alpha v\left(\hat{b}^P\right) + (1-\alpha)\left((1-\bar{\tau})y^p + \hat{T}^p\right) \geq (1-\alpha)\,y^p \\ &\hat{T}^p \geq 0, \end{aligned} \tag{A-14}$$

Denoting the multipliers on the two constraints in (A-14) by $\lambda_1$and λ_2, the first-order conditions are that $\hat{b}^P$ and $\hat{T}^p$ satisfies:

$$-\frac{1}{\delta} + \lambda_1 \alpha v'\left(\hat{b}^P\right) = 0 \tag{A-15}$$

$$-\frac{1-\delta}{\delta} + \lambda_1(1-\alpha) + \lambda_2 = 0. \tag{A-16}$$

From (A-15) it follows that $\lambda_1 > 0$, implying that the participation constraint of the president binds. Now solving for λ_1 from (A-15) in (A-16), we find that $\lambda_2 > 0$ and thus $\hat{T}^p = 0$ if

$$\frac{\alpha}{1-\alpha} v'\left(\hat{b}^P\right) > \frac{1}{1-\delta}. \tag{A-17}$$

From the participation constraint of the president satisfied with equality, it follows that $\hat{b}^P$ is again determined by

$$\alpha v\left(\hat{b}^P\right)=\frac{(1-\alpha)(1-\theta)\bar{\tau}\bar{y}}{1-\delta}. \tag{A-18}$$

Since $\hat{b}^P$ is decreasing in α in this case, we have that $\hat{b}^L=\hat{b}^L(\alpha)$ with $\hat{b}^{L\prime}(\alpha)<0$. Combining (A-17) and (A-18) the condition for $\lambda_2>0$ reduces to

$$\frac{v'\left(\hat{b}^L(\alpha)\right)}{v\left(\hat{b}^L(\alpha)\right)}>\frac{1}{(1-\theta)\bar{\tau}\bar{y}}.$$

The left-hand side of this condition is increasing in α, while the right-hand side is independent of α. The following equation thus implicitly defines a critical value of α, which we denote by α_M:

$$\frac{v'\left(\hat{b}^L(\alpha_M)\right)}{v\left(\hat{b}^L(\alpha_M)\right)}=\frac{1}{(1-\theta)\bar{\tau}\bar{y}}.$$

From (A-6), evaluated at α_M, we have

$$v\left(\hat{b}^L(\alpha_M)\right)=\frac{(1-\alpha_M)(1-\theta)\bar{\tau}\bar{y}}{\alpha_M(1-\delta)}.$$

Substituting this in the previous expression, we obtain

$$\alpha_M=\frac{1}{1+(1-\delta)v'\left(\hat{b}^L(\alpha_M)\right)}<\alpha_L.$$

This implies that, compared with the case where the legislator is poor, the parameter space where $\hat{T}^p=0$ is now larger (i.e., includes smaller values of α) when the legislator selected to decide spending is from the rich.

If $\alpha>\alpha_M$, then we have $\hat{T}^p=0$. (Note also that the participation constraint for the rich lobby in this case is simply $\bar{\tau}\bar{y}>\hat{b}^P$, which is satisfied with strict inequality as $\hat{b}^P<R^{**}<\bar{\tau}\bar{y}$).

If, on the other hand, $\alpha<\alpha_M$, then we have $\hat{T}^p>0$. From (A-15) and (A-16) we then find that $\hat{b}^P$ is determined by

$$v'\left(\hat{b}^P\right)=\frac{1-\alpha}{\alpha(1-\delta)}, \tag{A-19}$$

which implies that now $\hat{b}^P=R^{**}$ is greater than in the case where the legislator originates from the poor, i.e., $R^{**}>b^*$, since now it is more efficient to use bribes rather than income transfers to the poor in capturing the president. Moreover, as a consequence, the participation constraint of the president implies that the transfer to the poor is now lower compared to the case where the legislator is poor. In particular, from the participation constraint of the president, we have

$$\hat{T}^p=\frac{\bar{\tau}(1-\theta)\bar{y}}{1-\delta}-\frac{\alpha v\left(R^{**}\right)}{1-\alpha},$$

which is identical to (A-12) except that now $\hat{b}^P = R^{**}$ is greater and thus $\hat{T}^p$ is lower. Combining this with (A-19), we obtain

$$\hat{T}^p = \frac{1}{1-\delta}\left(\bar{\tau}(1-\theta)\bar{y} - \frac{v\left(R^{**}\right)}{v'\left(R^{**}\right)}\right).$$

Finally, it can be verified in a similar manner that in this case too the participation constraint of the rich elite is satisfied with strict inequality (given that $v\left(R^{**}\right) > R^{**}v'\left(R^{**}\right)$).

Summing up, recalling that the probability the spending legislator originates from the rich is given by η, we have:

Proposition 13 *Suppose that $\theta < \theta^*$ and $\alpha < \alpha_L$, and that under checks and balances, there is a multi-member legislature.*

1. *Consider first the case where there is checks and balances and the legislator selected to decide spending is from the rich. Then:*
   (a) *when $\kappa = 0$ so that there is no bribing, the equilibrium involves $\tau = 0$, $R^P = 0$, $R^L = 0$, $T^p = 0$, and $T^r = 0$, and the utility of poor agents is given by $(1-\theta)\bar{y}/\left(1-\delta\right)$;*
   (b) *when $\kappa = 1$, there exists an $\alpha_M < \alpha_L$ such that:*
      i. *If $\alpha > \alpha_M$, then $\tau = \bar{\tau}$, $R^P = 0$, $R^L = 0$, $b^P > 0$, $b^L = 0$, $T^p = 0$, and $T^r > 0$.*
      ii. *If $\alpha < \alpha_M$, then $\tau = \bar{\tau}$, $R^P = 0$, $R^L = 0$, $b^P = R^{**}$, $b^L = 0$, $T^p > 0$, and $T^r > 0$.*
2. *Now taking into account that the probability the rich can solve their collective action problem and bribe politicians is q and the probability that the legislator selected to decide spending will be from the rich with probability η, we have that:*
   (a) *if $\alpha > \alpha_M$, then the expected utility of poor agents is*
   $$U^p\left[\gamma = 1\right] = \frac{1}{1-\delta}\left((1-\theta)\bar{y} - q\eta(1-\theta)\bar{\tau}\bar{y} - q\left(1-\eta\right)\frac{2v(b^*)}{v'\left(b^*\right)}\right); \qquad \text{(A-20)}$$
   (b) *if $\alpha < \alpha_M$, then the expected utility of poor agents is*
   $$U^p\left[\gamma = 1\right] = \frac{1}{1-\delta}\left((1-\theta)\bar{y} - q\eta\frac{v\left(R^{**}\right)}{v'\left(R^{**}\right)} - q\left(1-\eta\right)\frac{2v(b^*)}{v'\left(b^*\right)}\right). \qquad \text{(A-21)}$$

Proposition 9 then follows by comparing the utility of the poor from (31) with (A-20) and (A-21), respectively.

Appendix to subsection 3.4

We here look at the case where the ego rents r can take any value. Let us focus on a constitution not involving checks and balances, i.e., $\gamma = 0$. Consider first the case where $\kappa = 0$ so that the rich can not bribe the president. The balance between direct transfers to the poor and rents to the president depends on how much the president values own rents relative to how he values utility of the poor. Define

$$\beta_S \equiv \frac{\frac{r}{\bar{y}}(1-\delta)}{1-\theta+(\theta-\delta)\bar{\tau}+\frac{r}{\bar{y}}(1-\delta)}$$

and

$$\beta^H \equiv \frac{\left(\bar{\tau}+\frac{r}{\bar{y}}\right)(1-\delta)}{1-\theta+(\theta-\delta)\bar{\tau}+\frac{r}{\bar{y}}(1-\delta)}.$$

The balance between direct transfers to the poor and rents to the president is then given by the solution to the maximization problem in (42):

If $\beta > \beta^H$, $T = 0$, and $R^P = \bar{\tau}\bar{y}$.

If $\beta_S \leq \beta \leq \beta^H$,

$$T = (\bar{\tau}(1-\delta) - \beta(1-\theta+(\theta-\delta)\bar{\tau}))\frac{\bar{y}}{1-\delta} + (1-\beta)r, \tag{A-22}$$

and

$$R^P = \beta(1-\theta+(\theta-\delta)\bar{\tau})\frac{\bar{y}}{1-\delta} - (1-\beta)r. \tag{A-23}$$

If $\beta < \beta_S$, $T = \bar{\tau}\bar{y}$, and $R^P = 0$.

Next, suppose that $\kappa = 1$. Again the rich lobby can never strictly increase its utility by offering a bribe that the president will accept. Any such offer is payoff equivalent for all parties and without loss of any generality we set $\hat{b}^P = 0$. The following proposition summarizes the case where the constitution does not have checks and balances:

Proposition 14 *Suppose $\gamma = 0$. Then the equilibrium policy always has $\tau = \bar{\tau}$, and:*

1. *If $\beta > \beta^H$, $T = 0$. The utility of poor agents in this case is $U^p[\gamma = 0] = (1-\theta)(1-\bar{\tau})\bar{y}/(1-\delta)$.*
2. *If $\beta_S \leq \beta \leq \beta^H$, transfers are given by (A-22). The utility of poor agents in this case is*
$$U^p[\gamma = 0] = \frac{1-\beta}{1-\delta}\left(1-\theta+(\theta-\delta)\bar{\tau}+\frac{(1-\delta)r}{\bar{y}}\right)\bar{y}. \tag{A-24}$$
3. *If $\beta < \beta_S$, $T = \bar{\tau}\bar{y}$. The utility of poor agents in this case is $U^p[\gamma = 0] = (1-\theta+(\theta-\delta)\bar{\tau})\bar{y}/(1-\delta)$.*

The case where the constitution involves checks and balances, i.e. $\gamma = 1$, and there is not bribing, i.e. $\kappa = 0$, is as discussed in the main text.

Next consider the case where there is bribing, i.e. $\kappa = 1$, and consider first the case where $\beta < \beta_S$. Then also with checks and balances in the constitution the president gets his preferred policy where all public income is used as transfers to the poor. If the rich lobby tries to bribe the president into setting a lower tax rate they would have to pay a higher bribe then what they save in taxes. Thus $\hat{b}^P = 0$.

Consider next the case where $\beta > \beta_S$. The rich lobby then solves the program

$$\max_{\{\hat{b}^P,\hat{\tau}\}} \frac{(\theta-(\theta-\delta)\hat{\tau})\,\bar{y}}{\delta} - \frac{\hat{b}^P}{\delta} \text{ subject to}$$

$$\left(\hat{b}^P + r\right)^{\beta}\left(\frac{(1-\theta+(\theta-\delta)\hat{\tau})\bar{y}}{1-\delta}\right)^{1-\beta} \geq r^{\beta}\left(\frac{(1-\theta+\bar{\tau}(\theta-\delta))\bar{y}}{1-\delta}\right)^{1-\beta}$$

$$\hat{\tau} \geq 0.$$

Denoting the multipliers on the two constraints by μ_1 and μ_2, the first-order conditions are that the derivatives of the maximization problem with respect to $\hat{b}^P$ and $\hat{\tau}$ satisfy:

$$-\frac{1}{\delta} + \mu_1\beta\left(\hat{b}^P + r\right)^{\beta-1}\left(\frac{(1-\theta+(\theta-\delta)\hat{\tau})\bar{y}}{1-\delta}\right)^{1-\beta} = 0, \tag{A-25}$$

and

$$-\frac{(\theta-\delta)\,\bar{y}}{\delta} + \mu_1(1-\beta)\left(\hat{b}^P + r\right)^{\beta}\left(\frac{(1-\theta+(\theta-\delta)\hat{\tau})\bar{y}}{1-\delta}\right)^{-\beta}\frac{(\theta-\delta)\bar{y}}{1-\delta} + \mu_2 = 0. \tag{A-26}$$

From (A-25) it follows that $\mu_1 > 0$, implying that the participation constraint of the president binds. Now solving for μ_1 from (A-25) and inserting in (A-26), we find that $\mu_2 > 0$ and thus $\hat{\tau} = 0$ if

$$\beta(1-\theta)\bar{y} > (1-\beta)\left(\hat{b}^P + r\right).$$

Using the participation constraint of the president with $\hat{\tau} = 0$ this can be reformulated as

$$\beta > \frac{\frac{r}{\bar{y}}\left(1+\frac{\bar{\tau}(\theta-\delta)}{1-\theta}\right)^{\frac{1-\beta}{\beta}}}{1-\theta+\frac{r}{\bar{y}}\left(1+\frac{\bar{\tau}(\theta-\delta)}{1-\theta}\right)^{\frac{1-\beta}{\beta}}}$$

where the left-hand side is increasing in β while the right-hand side is decreasing in β. The following equation thus implicitly defines a unique value of β, β_*, such that

$$\beta_* = \frac{\frac{r}{\bar{y}}\left(1+\frac{\bar{\tau}(\theta-\delta)}{1-\theta}\right)^{\frac{1-\beta_*}{\beta_*}}}{1-\theta+\frac{r}{\bar{y}}\left(1+\frac{\bar{\tau}(\theta-\delta)}{1-\theta}\right)^{\frac{1-\beta_*}{\beta_*}}}.$$

If $\beta > \beta_*$ then we have $\hat{\tau} = 0$. The utility of poor agents in this case is given by

$$U^p\left[\gamma = 1, \kappa = 1\right] = \frac{(1-\theta)\,\bar{y}}{1-\delta}.$$

In contrast, if $\beta < \beta_*$, then $\mu_2 = 0$ and $\hat{\tau} > 0$. In this case, we have:

$$\beta(1-\theta+(\theta-\delta)\hat{\tau})\bar{y} = (1-\beta)\left(\hat{b}^P + r\right).$$

Using the participation constraint for the president to substitute for $\hat{b}^P + r$ we find

$$(1-\theta+(\theta-\delta)\hat{\tau})\bar{y} = \left(\frac{1-\beta}{\beta}\right)^{\beta}\left(\frac{r}{\bar{y}}\right)^{\beta}(1-\theta+(\theta-\delta)\bar{\tau})^{1-\beta}\,\bar{y},$$

which determines $\hat{\tau}$ and it also follows that the utility of poor agents in this case is given by

$$\begin{aligned} U^p[\gamma=1,\kappa=1] &= \left(\frac{1-\beta}{\beta}\right)^{\beta}\left(\frac{r}{\bar{y}}\right)^{\beta}(1-\theta+(\theta-\delta)\bar{\tau})^{1-\beta}\frac{\bar{y}}{1-\delta} \\ &< U^p[\gamma=1,\kappa=0]. \end{aligned}$$

Is then straightforward to show that, similarly to before, the rich get a strictly higher utility by the bribe for policy proposal than without, and we proceed without repeating the proof for this.

The preceding analysis has established (proof in text):

Proposition 15 *Suppose that the constitution involves checks and balances (i.e., $\gamma = 1$).*

1. *When $\kappa = 0$ so that the rich lobby is not organized and there is no bribing, the equilibrium involves $\tau = \bar{\tau}$, $R^P = 0$, $R^L = 0$, and $T = \bar{\tau}\bar{y}$.*

2. *When $\kappa = 1$ so that the rich lobby is organized and there is bribing, then the equilibrium is as follows:*

   (a) *If $\beta > \beta_S$, then:*

      i. *If $\beta > \beta_*$, then $\tau = 0$, and $R^P = 0$, $R^L = 0$, $b^P > 0$, $b^L = 0$, and $T = 0$.*

      ii. *If $\beta < \beta_*$, then $R^P = 0$, $R^L = 0$, $b^P > 0$, $b^L = 0$, $\tau < \bar{\tau}$, and $T = \tau\bar{y}$.*
      Taking into account that the probability the rich can solve their collective action problem and bribe politicians is q, we have that:
      If $\beta > \beta_*$ the expected utility of poor agents is given by

$$U^p[\gamma=1] = \frac{(1-\theta)\,\bar{y}}{1-\delta} + (1-q)\frac{(\theta-\delta)\bar{\tau}\bar{y}}{1-\delta}. \tag{A-27}$$

      If $\beta < \beta_*$ the expected utility of poor agents is given by

$$\begin{aligned} U^p[\gamma=1] &= (1-q)\frac{(1-\theta+(\theta-\delta)\bar{\tau})\,\bar{y}}{1-\delta} \\ &\quad +q\left(\frac{1-\beta}{\beta}\right)^{\beta}\left(\frac{r}{\bar{y}}\right)^{\beta}(1-\theta+(\theta-\delta)\bar{\tau})^{1-\beta}\frac{\bar{y}}{1-\delta}. \end{aligned} \tag{A-28}$$

   (b) *If $\beta < \beta_S$, then there is no bribing and the expected utility of poor agents is given by $(1-\theta+(\theta-\delta)\bar{\tau})\bar{y}/(1-\delta)$.*

Finally, in the referendum on checks and balances we then have:

Proposition 16 1. *When $\beta > \beta^H$ the constitution will always involve checks and balances.*

2. *When $\beta_S \leq \beta \leq \beta^H$ then*

   (a) *When $\beta > \beta_*$ the constitution will involve no checks and balances if*

$$q > \frac{\beta\,(1-\theta+(\theta-\delta)\bar{\tau}) - (1-\beta)(1-\delta)\frac{r}{\bar{y}}}{(\theta-\delta)\bar{\tau}}, \tag{A-29}$$

   and it will involve checks and balances if the converse inequality holds.

(b) *When $\beta < \beta_*$ the constitution will involve no checks and balances if*

$$q - q\left(\frac{1-\beta}{\beta}\right)^{\beta}\left(\frac{r}{\bar{y}}\right)^{\beta}(1-\theta+(\theta-\delta)\bar{\tau})^{-\beta} > \beta - \frac{(1-\beta)\frac{r}{\bar{y}}(1-\delta)}{1-\theta+(\theta-\delta)\bar{\tau}}, \qquad \text{(A-30)}$$

and it will involve checks and balances if the converse inequality holds.

In both cases, a greater q (a higher likelihood of the rich lobby being organized) makes a constitution without checks and balances more likely.

3. *When $\beta < \beta_S$ voters are indifferent between a constitution with and without checks and balances.*

Proof. Part 1 follows as in this case under no checks and balances the poor pay maximum taxes but get no transfers, while under checks and balances there is a positive probability they will get transfers. Parts 2.(a) and 2.(b) follow after simple calculation by comparing (A-24) with (A-27) and (A-28), respectively. The effect of q in part 2 follows as the left-hand sides of (A-29) and (A-30) are both increasing in q while the left-hand sides of (A-29) and (A-30) are independent of q. (To see that the left-hand side of (A-30) is increasing in q note that this reduces to the condition $U^p[\gamma = 1, \kappa = 1] < U^p[\gamma = 1, \kappa = 0]$ which is always satisfied). Part 3 follows as in this case policy is the same whether the constitution involves checks and balances or not. ■