

# Why does the Parliamentary Regime Perform Better: Bureaucratic Power versus Veto Players

Marina Dodlova\*

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## Abstract

The political economy literature underlines that in presidential regimes politicians are more accountable to citizens because of the greater executive constraints and “checks and balances” system. However, empirical studies testify the contrary effect that parliamentary regimes perform better; in particular, in terms of the quality of governance and political stability. This paper contributes to finding an explanation of such a puzzle by studying a scope of bureaucratic power in political decision-making process in view of information deficiency of politicians. By bureaucratic power we mean rubber-stamping or conscious approval by politicians of their bureaucrats’ policy propositions without effective control. We demonstrate that the parliamentary regime has institutional constraints to limit the power of bureaucrats while the institutional structure of presidential regimes tends to promote informal agreements between politicians and bureaucrats.

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\*EconomiX, Université Paris Ouest - Nanterre la Défense, CNRS, France. E-mail: mdodlova@gmail.com

# 1 Introduction

One of crucial issues of the political science and economics literature is the comparative merits of presidential and parliamentary systems of governance in democracies. Many prominent scholars argue that presidential regimes are more accountable because of the greater institutional constraints on the executive and “checks and balances” system (see e.g. Persson et al., 1997; Przeworski et al., 1999). Indeed, along with election disciplining mechanism separation of powers between executive and legislative bodies helps preventing the abuse of power. “The system of checks and balances creates a conflict of interests between the executive and the legislature, yet requiring both bodies to agree on public policy. In this way, the two bodies discipline each other at the voters’ advantage“ (Persson et al., 1997). Thus, presidential regimes are supposed to have a more efficient institutional structure as compared to parliamentary regimes.

However, the empirical studies present the contrary evidence that actually parliamentary regimes based on the fusion of powers perform better. They are not only considered as less risky and more stable and survival regimes (Linz, 1978, 1994; Lijphart, 1999; Cheibub and Limongi, 2002) but also they demonstrate higher levels of governance (Gerring et al., 2009).

This paper contributes in finding an explanation of such a puzzle by studying the power of bureaucrats under information deficiency of politicians. By bureaucratic power we mean rubber-stamping or conscious approval by politicians of their bureaucrats’ policy propositions without effective control when politicians could or could not verify the payoffs of policy projects *ex ante*. We demonstrate that the institutional structure of the parliamentary regime allows to limit the power of bureaucrats while the institutional structure of presidential regimes tends to promote informal agreements between politicians and bureaucrats.

The expertise advantage of the bureaucratic agency is a corner stone in political models of delegation. Typically, the agency has or can acquire for some costs perfect knowledge of the connection between policy choices and policy outcomes, the legislature is uninformed on this count. Thus, despite that in democracies political superiors are elected for regulation and governance, the bureaucrats getting organized to take a collective action in politics (e.g. through public sector unions) can exert political power over their own superiors. Bureaucrats can influence on election outcomes and participate in choosing the policy course (Moe, 2006). Furthermore, very often political superiors in seeking loyalty tend to favor bureaucratic interests: promote job security, enhance autonomy, protect established programs. The normal way of thinking about bureaucrats, however, assumes that they have no political power at all. But bureaucrats are not only experts who have the informa-

tion leverage over their political superiors but also successful lobbyists exploiting the privileges of the institutional structure of democratic systems (Bennedsen and Feldmann, 2004). Moreover, there are known extreme cases when politicians informally act as the agents of the top bureaucrats and the latter exert real control over policy decisions. These aspects of delegation in political control models have been never seriously considered. As Moe (2006) stresses this important part of the delegation story is missed, and theorists tend to underestimate what bureaucrats can do to get their way.

Following, Persson and Tabellini (2000, 2007) we exemplify how economists may pursue an approach of comparative politics. In political science one can find some studies on the performance comparison of presidential and parliamentary regimes but even now there are a lot of debates, and many results prove to be contradictory and vague. Further, there is a large gap in examining the structure and efficiency of the bureaucracy under different institutional structures of government. Although information asymmetry and the political control problems are well recognized in both political economy and political science literature, almost no work has been done in analyzing the importance of bureaucratic power for the performance of political regimes.

More precisely, how we can convey the power of bureaucrats? It might be revealed through mechanisms of rubber-stamping and informal delegation of legislative proposals by politicians. We consider the model of different forms of delegation in the relationship between the politicians and their bureaucratic agent. We are interested in the process of public policymaking in which political representatives who are mainly uninformed about the repercussions of policy choices appoint bureaucrats to gather information necessary to make informed decisions. We do not focus on the transfer of formal decision-making power to bureaucrats but instead we draw attention to cases when the bureaucrats possess enough information to manipulate policy outcomes in their interests.

Indeed, in some cases, the agent is given formal authority to decide on policy (e.g. central banks), and in other cases, the agent merely makes recommendations or give advice on policy (e.g. investigatory commission). These are models on communication versus delegation with uninformed principals and informed agents (Dessein, 2002; Ludema and Olofsgard, 2008). But we focus on the other cases when politicians refrain from credible delegation but transfer their authority to take policy decisions in an informal way. We follow the literature and distinguish between simple rubber-stamping of the agent's proposition (Aghion and Tirole, 1997) and informal delegation (Baker et al., 1999) where the latter implies that "the boss can "promise" to ratify all the agent's proposed projects regardless of whether a given

project yields high or low benefits to the boss”. Following to Baker et al. (1999) we contrast informal delegation with informal authority, when it is the bureaucratic agent who is tempted to renege. Our analysis is also related to the concept of partial or transferable control by Aghion et al. (2002, 2004) where the principal can transfer control to the agent but cannot commit herself to do it.

The basic insight for the main theoretical results is following. In the parliamentary regime political decisions are formally made collectively; and this reduces the discretion of bureaucrats because all politicians are better to come to an agreement between themselves rather than put some informal authority down to the bureaucracy. While in the presidential regime the first two politicians might be discouraged by the presidential veto, and thus, they are more inclined to collude with bureaucrats on some policy projects. Two veto players in the system may reinforce this effect by increasing conflict between politicians. Thus, the system with more veto players creates more potential for the powerful bureaucracy.

It follows that in the parliamentary regime informal agreement between politicians and bureaucrats is not feasible, while in presidential regime it could be achieved under some conditions, namely the higher perception probability of reelection and lower cost of punishing the bureaucracy. Moreover, the presidential regime is characterized by lower economic welfare from adopted policy projects than the parliamentary regime in both cases with and without informal agreement between politicians and bureaucrats. This sheds light on the problem of seemingly good performance of presidential regimes. Hence, this paper reconsiders the institutional features of political regimes by referring to agency problems between politicians and their bureaucratic agents in different institutional bargaining environments.

The paper proceeds as follows. The next section introduces general set up. Section 3 presents the benchmark case and main propositions derived from the model. The last section concludes and suggests some directions for further research.

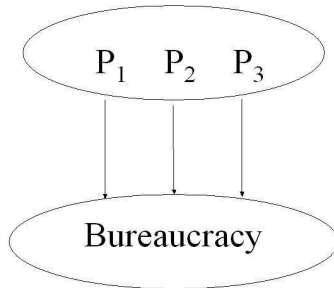
## 2 General set up

Consider two cases. The first one is a benchmark case when there is one policy-maker. In the second case let policy choices are made by the three incumbent legislators in legislative bargaining. There are two alternatives: to preserve a status quo or implement a new policy. In the latter case they should ratify some policy projects from a huge number of projects so that a final policy course is shaped by outcomes of the approved projects. However, the politicians need the bureaucracy for expertise knowledge about different legislative projects and policy outcomes. Although the politicians could acquire information about projects too, it is much more expensive

for them. The main intuition of the model is to demonstrate how the information asymmetry between politicians and bureaucrats under various bargaining political environments defines the scope of bureaucratic discretion and the way politicians delegate more or less informal decision-making power to their bureaucratic agents.

*Authority.* So we study a game involving one politician or three politicians who are engaged in different authority relationships subject to the political regime. According to Cox and McCubbins (2001) separate powers introduce an additional veto point into the political decision-making process so that parliamentary systems are decisive and presidential systems are resolute. Thus, following Tirole (2009) we distinguish between collegial authority and veto collegiality. The first one requires that both parties agree to depart from the status quo in order for an alternative policy to be implemented. It thus imposes a strong status quo bias. We refer this case to the fusion of powers of the parliamentary regime. The other regime implies veto collegiality under which one party has the right to impose the status quo if she does not like the other party's choice. Thus, we assume that in the parliamentary regime three politicians have collegial authority between themselves, while in the presidential regime the authority between two politicians is allocated collegially and the third politician (president) has the right to veto.

The bureaucracy helps the politicians to take policy decisions by screening policy projects and acquiring information about their outcomes. Assume that the bureaucracy is the only agent of political principals, so that it is considered as a single whole that is an administrative machine working for the elected officials. Each politician has the formal authority over the bureaucracy's propositions.



*Projects.* The politicians and bureaucracy can implement a status quo project 0 that yields known profit  $B_0^i > 0$  to politician  $i$  together with a private benefit of  $b_0$  to the bureaucracy. This status quo may be interpreted either as "doing nothing" (the parties decide not to interact, in which case  $B_0^i = b_0 = 0$  is a natural assumption), or as "pursuing current policy" or "renewing last year's budget," that is, as the absence of policy innovation. The agent's private benefit can be thought of as a perk or as

the disutility attached to implementing the project. The bureaucracy screens among  $n$  alternative projects  $k = 1 \dots n$ . Project  $k$  yields verifiable profit  $B_k^i$  to politician  $i$  together with private benefit  $b_k$  to the bureaucracy. While these profits and private benefits differ among projects, alternative projects all look ex ante identical.

However, it is known that among all the projects there are three each politician's preferred projects, which if politician  $i$ 's preferred project is chosen, yields the benefit  $B^i > 0$  for her,  $i = 1, 2, 3$ . Similarly, there is the bureaucracy's preferred project, which if it is chosen, yields for the agent the private gain of  $b > 0$ . Thus, each project is associated with four different benefits for three politicians and the bureaucracy, i.e.  $(X, Y, Z, \theta)$ . The idea is that if the first politician's preferred project is chosen then  $X = B^1$  and the others' benefits can be any with different probabilities. If the bureaucracy's preferred project is approved then  $\theta = b$ . For simplicity, let us assume that there are some congruence in government actors' preferences, and so there are projects which give the positive benefits for government actors, while the other projects yield the negative payoff for at least one of actors. In a simple case we suppose only two values, high -  $B_H^i > 0$  or  $b_H > 0$  and low -  $B_L^i < 0$  or  $b_L < 0$ . All these gains and benefits are a common knowledge.

For simplicity, let us assume that the bureaucracy is very risk averse and does not respond to monetary incentives. He then receives a constant wage, normalized at zero. The bureaucracy has zero reservation utility.

*Information.* Suppose that the nature of projects ex ante is unknown to the politicians and bureaucracy. The bureaucracy at private cost  $g_B(e)$  perfectly learns the payoffs of all candidate projects with probability  $e$ . With probability  $1 - e$  the bureaucracy learns nothing and still look at the projects as identical.

Similarly, the politicians choose how much time or effort to expend for learning payoffs. We assume that if one of the politicians learns project payoffs, this information becomes common knowledge for all politicians. At private cost  $g_P(E)$ , the politicians become perfectly informed with probability  $E$  and learn nothing with probability  $1 - E$ . We focus on the simultaneous case of acquiring information by the politicians and bureaucracy. The function  $g_k(\cdot)$  is increasing and strictly convex and satisfy  $g_k(0) = 0$ ,  $g'_k(0) = 0$ ,  $g'_k(1) = \infty$ , where  $k = P, B$ . For simplicity let us specify the information cost function as  $g_k(x) = \frac{Ax^2}{1-x}$ ,  $x = e, E$ , and  $A = 1$  for the bureaucracy ( $x = e$ ) and  $A \gg 1$  for the politicians ( $x = E$ ), so that it satisfies all the aforementioned properties.

Thus, for example, the project with higher benefits for the pool of politicians and the bureaucracy is approved with probability  $eE$ . The awareness of the politicians about project payoffs allows them to know all payoffs of each project and then they could negotiate between each other about approving projects. In such a way they

could agree on the project which gives a positive payoff in total but a negative benefit to one of them or two because we assume the politicians could bargain appealing to future compensation between themselves in the next round. We do not consider the dynamic case of the game but assume that the probability of future encounters is considerably high in order to allow for this in the current period. The perfect example of the mechanism considered is logrolling. Therefore, a crucial difference of a parliamentary regime with a presidential one lies in that the politician who has a right of veto, i.e. the president, does not bargain and veto all projects yielding a negative benefit for her.

If politicians are informed about the payoffs of projects they can override the propositions made by the bureaucracy so that they exercise their formal decision-making power and control the bureaucracy's activity. Otherwise, the politicians just rubber-stamping the propositions of the bureaucracy without effective control.

We assume that the politicians have the perceived reelection probability. Then, to what extent the politicians will bargain between themselves and rely on the bureaucracy by rubber-stamping will be affected by their probability of remaining in office in the future. This probability which in fact are determined by the effort they choose to spend to be informed. Without loss of generality one can assume that this perceived reelection probability will be exactly the same as the probability of awareness about policy projects because it also equals the level of effort spent by the politicians to learn the payoffs in order to ratify most efficient projects. The implicit proposition is that each politician presents the interests of one part of the electorate. As there are only three politicians suppose that they are representatives of equal parts of all unit mass population. Finally, although we do not have citizens in our model it is reasonable to assume that final welfare of all politicians and the bureaucracy is a good indicator of economic development in a particular regime.

*Timing.* The timing in each period is following. First, one of the politicians picked up randomly chooses an amount  $w$  to pay the bureaucracy, so that the bureaucracy's utility equals or exceeds his reservation utility. Second, the bureaucracy and each politician decides privately to gather information about  $n$  policy projects' payoffs. Third, the bureaucracy observes the projects's payoffs and ignores those projects, that are considered as not efficient from its point of view, and their existence is not disclosed to the politicians if they are uninformed. But if politicians are informed, they may choose from all  $n$  projects and override the bureaucracy's propositions. Fourth, the politicians pick a number of projects (or non) on the basis of their information and the information communicated by the bureaucracy. In the end, the players get the payoffs of projects approved.

## 2.1 Information structures

Let us consider the discrete case when there are only two possible values for projects' payoffs for each actor, high -  $B_H^i > 0$  or  $b_H > 0$  and low -  $B_L^i < 0$  or  $b_L < 0$ ,  $i = 1, 2, 3$ . Assume in the case of three politicians that for all politicians  $B_H^1 = B_H^2 = B_H^3 = B_H$  as well as  $B_L^1 = B_L^2 = B_L^3 = B_L$ . Then they choose between 16 possible projects. Assume also that  $B_0 = 0$  and  $b_0 = 0$ ,  $B_H + B_L > 0$ ,  $B_H + 2B_L < 0$ , then bargaining will differ in the parliamentary and presidential regimes.

The following four information structures could arise:

- Both parties are informed (probability  $eE$ ): each recommends his preferred project.
- Only the bureaucracy is informed (probability  $e(1 - E)$ ).
- Only the politicians are informed (probability  $E(1 - e)$ ).
- No one is informed (probability  $(1 - e)(1 - E)$ ): the status quo is implemented with probability 1.

### *Case 1: Both parties are informed*

In this case the politicians are informed so they will choose only those projects that yield high benefit for them and they will override the propositions of the bureaucracy. In the benchmark case the politician reconsiders the bureaucratic propositions of the 1 and 2 projects and chooses projects 1 and 3 because they both give her higher benefit of  $B_H$ . In the parliamentary regime all projects which give the total payoff for all politicians more than  $B_0 = 0$  are approved. These are projects by number 1,2,3,4,6,7,9,12. In the presidential regime only projects 1,2,3,4,6,7 will be chosen as the first politician has the right to veto and he chooses only those projects which yield no less than  $B_0 = 0$ . Thus, in the parliamentary case the status quo is sustained with the less probability than in the presidential regime.

The mechanism of *informal delegation* might be launched in this case if the politicians promise to ratify all projects proposed by the bureaucracy even if they are not in the best interest of the politicians. This induces superior effort from the agent (Baker et al. 1999) and these benefits from increased effort in next rounds can outweigh the expected cost of approved poor projects with current low benefit for politicians. Under informal delegation the bureaucracy will propose the projects with high benefit for him that is  $b_H$  and in the benchmark case the politician approves the propositions of the bureaucracy (i.e. projects 1 and 2) without effective control. In the parliamentary regime politicians are willing to ratify all proposed projects so that projects by number 1,2,3,5,9,10,11,13 might be approved. In the



presidential regime under informal delegation only projects by number 1,2,3,5 can be chosen because the president vetoes all the projects with a lower benefit for her.

***Case 2: Only the bureaucracy is informed***

When the only bureaucracy informed there are two cases possible: the politicians can just rubber stamp all proposed projects or veto them. If the expected payoff is higher than 0 the politicians rubber-stamp the legislative project, otherwise they veto the proposed projects. In the benchmark case the politician accept the bureaucracy's propositions of the 1 and 2 projects if her expected payoff is higher than 0. In both presidential and parliamentary regimes the same range of projects by number 1,2,3,5,9,10,11,13 will be ratified, because the president cannot distinguish the poor project for him. However, she approves them if and only if her expected payoff is higher than  $B_0 = 0$ .

According Baker et al. (1999) there may exist an informal agreement that could dominate both vetoing and rubber-stamping: the bureaucracy could be granted informal authority to recommend only projects yielding  $B_H$ , and the politicians could ratify all proposed projects but threaten to retract the bureaucracy's future authority if  $B_L$  is realized. Since the politicians' benefit is not contractible (and is not even observable to the politicians until implementation), this informal agreement must be enforced through rent sharing in a long-run relationship. That is, the bureaucracy will receive an "efficiency wage" payoff so long as he does not abuse his informal authority (i.e., as long as he recommends only  $B_H$  projects), and the agreement will be terminated if he abuses his authority. Then the bureaucracy proposes the projects by number 1 in the benchmark case, 1,2,3,9 in the parliamentary regime and 1,2,3 in the presidential regime and all projects will be ratified. We denote this case of informal agreement by *informal authority* of the bureaucracy.

***Case 3: Only the politicians are informed***

In this case the bureaucracy looks at projects as identical so it proposes all projects, while the politicians could see which of them yield benefit greater than  $B_0 = 0$ . Thus, in the benchmark case the politician accepts projects by number 1 and 3 because they yield high benefit for her. In the parliamentary regime the following projects will be approved - 1,2,3,4,6,7,9,12. In the presidential regime, when there is no bargaining between three of politicians only six projects are chosen - 1,2,3,4,6,7 because projects 9 and 12 yield the lower benefit for the president.

In case when politicians are informed and the bureaucracy is uninformed there exist another interesting mechanism which we call *informal concern*. It consists in that the informed principal (in our case politicians) ratifies only those projects which give high benefit for the bureaucracy in order to increase their search intensity in future. Thus, we add Baker et al.'s (1999) classification of informal phenomena by

this additional type informal agreement.

Under informal concern the politicians ratify project 1 in the benchmark case, projects 1,2,3,9 in the parliamentary regime and projects 1,2,3 in the presidential regime because these projects yield positive payoffs for all actors<sup>1</sup>.

### 3 Model

#### 3.1 Benchmark case

In the benchmark case we distinguish between centralization and informal agreement without pertaining to any political regime. The utilities of the politician and the bureaucracy are their benefits from all projects approved less the information cost. Thus, the utilities under centralization are  $u_P^c = 2B_H E + (B_H + B_L)e - (B_H + B_L)eE - g(E)$  for the politician and  $u_B^c = (b_H + b_L)E + 2b_H e(1 - E) - g(e)$  for the bureaucracy. Respectively, under informal agreement the utilities will be  $u_P^{inf} = B_H E + B_H e - (B_H - B_L)eE - g(E)$  and  $u_B^{inf} = b_H(E + e) - g(e)$ . Then the reaction curves for each case will be following:

Centralization	Informal agreement
$2B_H - e(B_H + B_L) = g'(E)$	$B_H - e(B_H - B_L) = g'(E)$
$2b_H(1 - E) = g'(e)$	$b_H = g'(e)$

The interesting expected result is that under centralization both the politician and bureaucracy are better informed than under informal agreement that is under centralization political decisions are taken with more effective control and so the final economic welfare is higher. Indeed, under centralization case the bureaucracy's effort equals

$$e^c = 1 - \sqrt{\frac{1}{1 + 2b_H(1 - E)}} \quad (1)$$

and under informal agreement it will be

$$e^{inf} = 1 - \sqrt{\frac{1}{1 + b_H}}. \quad (2)$$

To prove that the bureaucracy's effort under centralization is greater than under informal agreement assume the reverse, i.e.  $e^c < e^{inf}$  then

$$1 - \sqrt{\frac{1}{1 + 2b_H(1 - E)}} < 1 - \sqrt{\frac{1}{1 + b_H}}, \quad (3)$$

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<sup>1</sup>Appendix A lists the approved projects in all cases.

that is

$$\sqrt{\frac{1}{1 + 2b_H(1 - E)}} > \sqrt{\frac{1}{1 + b_H}}, \quad (4)$$

or  $1 + 2b_H(1 - E) < 1 + b_H$  and  $2(1 - E) < 0$  so that  $E > 1$  but that is impossible under construction as  $E \in [0, 1]$ . Thus, we get that  $e^c \geq e^{inf}$ .

The politician's effort is derived from the reaction curves  $2B_H - e(B_H + B_L) = g'(E)$  and  $B_H - e(B_H - B_L) = g'(E)$ . After reorganizing these equations we get  $2B_H - e(B_H + B_L) = g'(E)$  and  $2B_H - e(B_H - B_L) - B_H + 2B_L = g'(E)$ . In the latter reaction curve the left side is considerable smaller because, first,  $e^c \geq e^{inf}$  and second,  $-B_H + 2B_L < 0$  under presupposition about project payoffs. Thus,  $E^c \geq E^{inf}$ .

### 3.2 Power of the bureaucracy in parliamentary and presidential regimes

In presidential and parliamentary regimes we also get two cases of centralization and informal agreement. The utilities in these cases for the politicians and the bureaucracy can be calculated as the total sum of their payoffs from approved projects in all informational structures for each particular regime respectively. Thus, for example, the total utility of the politicians in the centralization case is equal to  $Ee(18B_H + 6B_L) + (1 - E)e(12B_H + 12B_L) + E(1 - e)(18B_H + 6B_L) - g(E)$ . Similarly, the utilities in all other cases are calculated. Then, the equilibrium reaction curves will be the following:

	Parliamentary regime	Presidential regime
Centralization	$e(-12B_H - 12B_L) + 18B_H + 6B_L = g'(E)$ $8b_H(1 - E) = g'(e)$	$e(-12B_H - 12B_L) + 14B_H + 4B_L = g'(E)$ $8b_H(1 - E) = g'(e)$
Informal agreement	$e(-12B_H + 6B_L) + 9B_H + 3B_L = g'(E)$ $4b_H = g'(e)$	$e(-6B_H) + 7B_H + 2B_L = g'(E)$ $E(-2b_H) + 3b_H = g'(e)$

In each case one can get the expressions for the efforts of the politicians and bureaucrats from the reaction curves that help to formulate a number of interesting results. First, the model predicts an interesting finding about feasibility of informal agreements in political regimes.

*Proposition 1.* In the parliamentary regime the informal agreement between the politicians and bureaucracy is hardly feasible. Only if  $0 < b_H < 5/16$  it becomes feasible, but even in this case the effort of the bureaucracy does not change subject to the information weakness of the politicians.

This result follows from that the bureaucracy does not react on the increase or decrease of the politicians' effort for learning which policy choices are beneficial.

So in this case there is no room for enlarging the bureaucratic power over policy making.

The second finding concerns the level of effort of all actors in two regimes in centralization case.

*Proposition 2.* In the presidential regime the level of effort of the politicians under centralization is lower than in the parliamentary regime.

The difference between efforts depends on the parameter  $A$  in the information cost function that indicates how much it is costly for the politicians to screen the projects compared with the bureaucracy.

The intuition is that the level of the bureaucracy's information privilege is greater in the presidential regime because the politicians are discouraged by veto player to while in the parliamentary regime the control from the politicians is higher and so the power of the bureaucracy is less than in the presidential regime.

The third proposition refers to the level of efforts of government actors in the presidential regime under centralization and in the case of informal relations.

*Proposition 3.* In the presidential regime the informal agreement leads to lower efforts of all the politicians and bureaucracy.

Finally, one can compare the level of welfare of all actors in two regimes that lead us to conclude which regime proves to give a more efficient total economic benefit.

*Proposition 4.* The level of economic welfare of the politicians and bureaucracy is greater in the parliamentary regime.

Let us summarize our comparative results in a visual way:

	Parliamentary regime		Presidential regime
Centralization	$E_{parl}^c$	$>$	$E_{pres}^c$
	$e_{parl}^c$	$<$	$e_{pres}^c$
			$\vee$
Informal agreement	hardly feasible		$E_{pres}^{inf}$
	hardly feasible		$e_{pres}^{inf}$

Further,

	Parl		Pres
Centralization	$W_{parl}^c$	$>$	$W_{pres}^c$
			$\vee$
Informal agreement			$W_{pres}^{inf}$

These results demonstrate the main regularities and differences between the regimes. The intuition for the finding is simple. In the parliamentary regime a decision is made collectively while in the presidential regime there is one player

who has a right to veto all non beneficial projects. Then, in the former case the politicians could eliminate any conflict by bargaining between each other while in the latter case the president is not flexible about her benefit from projects. These environment features create different incentive dilemmas for the politicians and the bureaucracy.

In fact, in the parliamentary regime the politicians may come to agreement between each other which projects are to be approved so that the bureaucracy is discouraged in acquiring a lot of information about project payoffs because its propositions will be more likely overridden. On the contrary, in the presidential regime the veto player creates a conflict between politicians which decreases their initiative in learning the project payoffs and so increases the initiative from the bureaucracy. The extension when there are more than one veto player discovers that indeed the more conflict between politicians leads to the more powerful bureaucracy.

Finally, we get that the presidential regime is characterized by lower economic welfare from adopted policy projects than the parliamentary regime in both cases with and without informal agreement between politicians and bureaucrats. So our result can help to explain why the parliamentary regimes perform better by addressing to the scope of the bureaucratic discretion. The institutional structure of the parliamentary regime provides less informal authority to the bureaucracy to manipulate policy choices.

## 4 Conclusion

This paper studies the issues of informal delegation and relational agreements in political agency. Following Aghion and Tirole (1997), Baker et al. (1999) and Tirole (1999) we consider the rubber-stamping, informal delegation and informal authority phenomena in various institutional bargaining environments, like presidential and parliamentary regimes. We argue that the different institutional bargaining environment defines the structure of agency problems between the politicians and their bureaucratic agents. Information asymmetry and policy uncertainty are also crucial for the type of relationship between government actors.

The main focus of the paper is to consider the power of the bureaucracy namely the information privilege that it may use to manipulate the policy outcomes under different bargaining rules between politicians with and without a veto player. It is interest to generalize the model and consider more than two project values as well as to apply the result to more than three political principals, although in reality agenda setters are not of a great deal.

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## A Project selection procedure

### Case 1. One politician.

	1	2	3	4
Prob	$w_1$	$w_2$	$w_3$	$w_4$
$P$	$B_H$	$B_L$	$B_H$	$B_L$
$A$	$b_H$	$b_H$	$b_L$	$b_L$

Information structure	Relationship	Approved Projects	Utility
Ee	Centralization	1,3	$2B_H$ and $b_H + b_L$
	Informal delegation	1,2	$B_H + B_L$ and $2b_H$
(1-E)e	Rubber-stamping	1,2	$B_H + B_L$ and $2b_H$
	Informal authority	1	$B_H$ and $b_H$
E(1-e)	Centralization	1,3	$2B_H$ and $b_H + b_L$
	Informal concern	1	$B_H$ and $b_H$
(1-E)(1-e)		veto all projects	

### Case 2. Three politicians.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Prob	$w_1$	$w_2$	$w_3$	$w_4$	$w_5$	$w_6$	$w_7$	$w_8$	$w_9$	$w_{10}$	$w_{11}$	$w_{12}$	$w_{13}$	$w_{14}$	$w_{15}$	$w_{16}$
$P_1$	$B_H$	$B_H$	$B_H$	$B_H$	$B_H$	$B_H$	$B_H$	$B_H$	$B_L$	$B_L$	$B_L$	$B_L$	$B_L$	$B_L$	$B_L$	$B_L$
$P_2$	$B_H$	$B_L$	$B_H$	$B_H$	$B_L$	$B_H$	$B_L$	$B_L$	$B_H$	$B_L$	$B_H$	$B_H$	$B_L$	$B_H$	$B_L$	$B_L$
$P_3$	$B_H$	$B_H$	$B_L$	$B_H$	$B_L$	$B_L$	$B_H$	$B_L$	$B_H$	$B_H$	$B_L$	$B_H$	$B_L$	$B_L$	$B_H$	$B_L$
$A$	$b_H$	$b_H$	$b_H$	$b_L$	$b_H$	$b_L$	$b_L$	$b_L$	$b_H$	$b_H$	$b_H$	$b_L$	$b_H$	$b_L$	$b_L$	$b_L$

$w_j$ ,  $j = 1, \dots, 16$  is the probability of discovering this project (can be expressed in the efforts of both politicians and the bureaucracy).

$$B_H + B_L > B_0 = 0, B_H + 2B_L < B_0 = 0$$

The others (non mentioned projects) are vetoed.



Information structure	Relationship	Political Regime	Approved Projects	Utility
Ee	Centralization	Parl	1,2,3,4,6,7,9,12	$18B_H + 6B_L$ and $4b_H + 4b_L$
		Pres	1,2,3,4,6,7	$14B_H + 4B_L$ and $3b_H + 3b_L$
	Informal delegation	Parl	1,2,3,5,9,10,11,13	$12B_H + 12B_L$ and $8b_H$
		Pres	1,2,3,5	$8B_H + 4B_L$ and $4b_H$
(1-E)e	Rubber-stamping	Parl	1,2,3,5,9,10,11,13	$12B_H + 12B_L$ and $8b_H$
		Pres	1,2,3,5,9,10,11,13	$12B_H + 12B_L$ and $8b_H$
	Informal authority	Parl	1,2,3,9	$9B_H + 3B_L$ and $4b_H$
		Pres	1,2,3	$7B_H + 2B_L$ and $3b_H$
E(1-e)	Centralization	Parl	1,2,3,4,6,7,9,12	$18B_H + 6B_L$ and $4b_H + 4b_L$
		Pres	1,2,3,4,6,7	$14B_H + 4B_L$ and $3b_H + 3b_L$
	Informal concern	Parl	1,2,3,9	$9B_H + 3B_L$ and $4b_H$
		Pres	1,2,3	$7B_H + 2B_L$ and $3b_H$
(1-E)(1-e)		Parl	veto all projects	
		Pres	veto all projects	

## B Proofs

*Proof of Proposition 1.* For the parliamentary informal case the reaction curve of the bureaucracy can be written as

$$4b_H = \frac{2e - e^2}{(1 - e)^2} \quad (5)$$

Hence, we get that

$$e = 1 - \sqrt{\frac{1}{1 + 4b_H}} \quad (6)$$

To verify that  $e$  will be in the interval of  $[0, 1]$  we should claim that  $b_H > 0$  which is held upon presupposition. Further, from 2 it is evident that the level of information intensity search of the bureaucracy is not dependent from the politicians' information grounding.

Similarly, from the reaction curve of the politicians we obtain that

$$E = 1 - \sqrt{\frac{A/3}{B_H(4\sqrt{\frac{1}{1+4b_H}} - 1) + B_L(3 - 2\sqrt{\frac{1}{1+4b_H}}) + A/3}} \quad (7)$$

In order to control for that  $E \in [0, 1]$  we should check that two inequations are binding simultaneously,

$$0 < \frac{A/3}{B_H(4\sqrt{\frac{1}{1+4b_H}} - 1) + B_L(3 - 2\sqrt{\frac{1}{1+4b_H}}) + A/3} < 1 \quad (8)$$

where  $A > 0$  and  $B_H > 0$ ,  $b_H > 0$ ,  $B_L < 0$ , but  $B_H + B_L > 0$ ,  $B_H + 2B_L < 0$ . Hence, the double inequality is held when

$$B_H(4\sqrt{\frac{1}{1+4b_H}} - 1) + B_L(3 - 2\sqrt{\frac{1}{1+4b_H}}) > 0, \quad (9)$$

or

$$(4\sqrt{\frac{1}{1+4b_H}} - 1) + \frac{B_L}{B_H}(3 - 2\sqrt{\frac{1}{1+4b_H}}) > 0, \quad (10)$$

then

$$(4 - 2\frac{B_L}{B_H})\sqrt{\frac{1}{1+4b_H}} - (1 - 3\frac{B_L}{B_H}) > 0, \quad (11)$$

and

$$\sqrt{\frac{1}{1+4b_H}} > \frac{1 - 3\frac{B_L}{B_H}}{4 - 2\frac{B_L}{B_H}}. \quad (12)$$

Expression (8) is binding if and only if  $b_H < 5/16$ .

*Proof of Proposition 2.* From the reaction curves of the bureaucracy the level of the bureaucracy's effort are equal to the same expression under centralization in both parliamentary and presidential regimes

$$e = 1 - \sqrt{\frac{1}{8b_H(1-E)+1}} \in [0, 1]. \quad (13)$$

While the search intensity of the politicians are defined from the following:  
in the parliamentary regime

$$E = 1 - \sqrt{\frac{A}{A + 12b_H - 6(B_H + B_L) + 12(B_H + B_L)\sqrt{\frac{1}{8b_H(1-E)+1}}}} \quad (14)$$

in the presidential regime

$$E = 1 - \sqrt{\frac{A}{A + 10b_H - 8(B_H + B_L) + 12(B_H + B_L)\sqrt{\frac{1}{8b_H(1-E)+1}}}} \quad (15)$$

Comparing (10) and (11) one can see that under centralization the level of the politicians' effort is higher in case of the parliamentary regime because  $B_H + B_L > 0$ . Indeed, expressions (10) and (11) differ by the second and third components in the denominator sum. So  $12b_H - 6(B_H + B_L)$  is more than  $10b_H - 8(B_H + B_L)$  as it equals to  $B_H + B_L + B_H > 0$  which is held because  $B_H + B_L > 0$  under construction.

*Proof of Proposition 3.* The levels of effort under informal agreement in the presidential regime are following:

$$e = 1 - \sqrt{\frac{1}{1 + 2b_H(1 - E) + b_H}} \quad (16)$$

$$E = 1 - \sqrt{\frac{A}{A - b_H + 2(B_H + B_L) + 6b_H\sqrt{\frac{1}{1 + 2b_H(1 - E) + b_H}}}} \quad (17)$$

They prove to be smaller than the levels of effort under centralization (9) and (11).

More precisely, first, compare the efforts of the politicians. For simplicity substitute  $B_H = h > 0$  and  $B_H + B_L = d > 0$ .

Let's introduce a new function as a difference of two effort levels. Then, in order to demonstrate that in the centralization case the politicians become informed at a greater extent it is remained to show that the following function is positive whenever  $E_{centr}^{pres}, E_{inf}^{pres} \in [0, 1]$

$$f(E_{centr}^{pres}, E_{inf}^{pres}) = 11h - 10d + 12d\sqrt{\frac{1}{8h(1 - E_{centr}^{pres}) + 1}} - 6h\sqrt{\frac{1}{1 + h + 2h(1 - E_{inf}^{pres})}} \quad (18)$$

The first-order constraints will be following:

$$f'_d(\cdot) = -10 + 12\sqrt{\frac{1}{8h(1 - E_{centr}^{pres}) + 1}} \quad (19)$$

$$f'_{E_{centr}^{pres}}(\cdot) = -6d[8h(1 - E_{centr}^{pres}) + 1]^{-3/2}(-8h) \quad (20)$$

$$f'_{E_{inf}^{pres}}(\cdot) = 3h[1 + h + 2h(1 - E_{inf}^{pres})]^{-3/2}(-2h) \quad (21)$$

$$f'_h(\cdot) = 11 - 6\sqrt{\frac{1}{1 + h + 2h(1 - E_{inf}^{pres})}} + 3h[1 + h + 2h(1 - E_{inf}^{pres})]^{-3/2}(1 + 2(1 - E_{inf}^{pres})) - 6d[8h(1 - E_{centr}^{pres}) + 1]^{-3/2}(8(1 - E_{inf}^{pres})) \quad (22)$$

There is no point when all the first derivatives are zero so the function does not have extremum points in the interval of  $[0,1]$ . Consequently, to show that the function is positive we need to look at corner values and the conditional positive sign of the first derivatives. In this case it is held that the function is increasing in the interval of  $[0,1]$  and the border values are positive so the function is positive. This means that  $E_{centr}^{pres} > E_{inf}^{pres}$ .