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BUREAUCRATS OR POLITICIANS?

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Politicians are more efficient for tasks that do not involve too much specific technical ability relative to effort; there is uncertainty about ex post preferences of the public and flexibility is valuable; time inconsistency is not an issue; small but powerful vested interests do not have large stakes in the policy outcome; effective decisions over policies require taking into account policy complementarities and compensating the losers. We then compare this benchmark with the case in which politicians choose when to delegate and we show that the two generally differ.

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Bureaucrats or Politicians?*

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Abstract

Policies are typically chosen by politicians and bureaucrats. This paper investigates the efficiency criteria for allocating policy tasks to elected policymakers (politicians) or non elected bureaucrats. Politicians are more efficient for tasks that do not involve too much specific technical ability relative to effort; there is uncertainty about ex post preferences of the public and flexibility is valuable; time inconsistency is not an issue; small but powerful vested interests do not have large stakes in the policy outcome; effective decisions over policies require taking into account policy complementarities and compensating the losers. We then compare this benchmark with the case in which politicians choose when to delegate and we show that the two generally differ.

JEL classifications: H1 E00 K00.

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1 Introduction

Policies are chosen and implemented by both elected representatives (politicians) and non elected bureaucrats. The idea that politicians choose policies and bureaucrats simply implement them is simplistic;

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in fact the boundaries between decision and execution are a grey area and in many cases bureaucrats do much more than executing either de jure or de facto. In most countries non elected central bankers conduct monetary policy, with much independence. Regulatory policies are normally the result of both political and bureaucratic intervention. Fiscal policy is, instead, by and large chosen by elected representatives (governments and legislatures); bureaucrats are involved in important aspects of auditing and implementation, but they do not choose tax rates or the amount of spending for their department. Foreign policy decisions are made by politicians, sometimes after consultation with diplomatic or military personnel.

What criteria are used to allocate decision power amongst politicians and bureaucrats? We explore this question both from the point of view of economic efficiency and from the positive point of view of what politicians would choose. First we ask what is the socially optimal allocation of tasks, that is the allocation that would be chosen by every member of this society behind a veil of ignorance at a constitutional table, or, equivalently, by a social planner. Then we discuss the positive question of whether and how politicians interested in reelection would find it in their interests to delegate certain tasks (and which ones) to bureaucrats.

Economists have emphasized one specific argument in favor of dele-

gation of policy to a non elected bureaucrat: time inconsistency in monetary policy. Rogoff (1985) pointed out how an independent and inflation averse central banker not subject to ex post democratic control would improve social welfare.[1] But, as political scientists know well there is much more to think about. For instance, even fiscal policy is marred with a host of time inconsistency problems, but societies seem reluctant to allocate this policy prerogative to independent bureaucrats. Note, however, that Blinder (1997) argues that some aspects of fiscal policy could be allocated to an independent agency operating like an independent Central Bank[2]. An interesting question is why this never happens. An ability to commit to a course of action may even be desirable in foreign policy, which however is always the prerogative of appointed politicians, at least in the more relevant phase of choosing the general strategy.[3] The raise of the regulatory state has made the bureaucracy a key player in both the decisions and the execution of a large amount of legislation.

Our starting point is the premise that the main difference between

[1]See Kydland and Prescott (1977) and Barro and Gordon (1983) for the "classic" statement of the time inconsistency problem. Walsh (1995) and Persson and Tabellini (1993) discussed "contractual" arrangements between popular representatives and independent central bankers. For an empirical discussion of the benefits of independent central bankers see Grilli Masciandaro and Tabellini (1991), Alesina and Summers (1993) for OECD countries and Cukierman (1992) for a larger sample of countries.

[2]. Also the Business Council of Australia (1999) proposed that tax policy in Australia be set by an independent agency within limits imposed by the legislature.

[3]See Putnam (1988) for a discussion of the role and benefits of commitments in international relations.

politicians and bureaucrats lies in their motivations. Politicians are motivated by the goal of winning elections. Bureaucrats are motivated by "career concerns", that is they want to fulfill the goals of their organization because this improves their professional prospects in the public or private sector.[4] In addition, by appearing competent, the bureaucrat can guarantee his autonomy and independence. [5] Armed with this premise, we analyze both a normative and a positive model of task allocation. In the former a social planner would optimally assign tasks in order to maximize efficiency and by optimally using the different incentives of bureaucrats and politicians. In a positive model the politicians themselves choose when to delegate and the opportunistic motivation of politicians determines what is delegated. As we show below, the normative and positive implications for task attribution do not coincide.

We analyze many different types of policies, trying to be reasonably exhaustive. From a perspective of economic efficiency, politicians are preferable for tasks that have the following features: i) differences in performance are due to effort, rather than individual talent or technical ability; ii)the preferences of the public are unstable and uncertain, so that flexibility is valuable, a case that may be especially relevant for

[4]For a discussion of how bureaucrats are motivated by prospect of career enhancement and this leads them to internalize the goals of the organization, see the classic treatment in Wilson (1989) especially Chapter 9.

[5] See Carpenter (2001) for a discussion of this point.

changing and complex policy environments; iii) time inconsistency is unlikely to be a relevant issue; iii) the nature of the polciy is such that politicians cannot strategically distort policy choices in favor of short term objectives and against long term welfare; iv) the stakes for organized interest groups are small, or the legal system is poorly designed so that corruption is widespread; v) side payments to compensate the losers are desirable and relevant, or bundling of different aspects of policy management and a comprehensive approach is important. The reverse applies to the attribution of prerogatives to bureaucrats.

When politicians (rather than social planners) choose what to delegate, the results are quite different. Politicians want to retain those tasks that are likely to generate large rents, large campaign contribution or bribes. They are instead more inclined to delegate tasks that are "risky", in the sense that they may lead to policy failures: blame shifting to bureaucrats shields the politician from the risk. Politicians also never delegate redistributive tasks, because those allow politicians to construct winning coalitions of voters and lead more easily to electoral victory.

A few examples may clarify some of our points. Monetary policy involves fairly sophisticated skills, has relatively few distributional consequences (compared to say to fiscal policy) and social preferences on what is the appropriate goal of monetary policy are quite stable: at least

ex-ante most people would agree that monetary policy ought to control inflation with some room for output stabilization.[6] Moreover, politicians can blame (as they often do) the central bank for downturns in the economy. Hence, delegation to an independent Central Bank seems desirable and politically attractive. Incidentally, these arguments provide a rationale for independent central bankers even for those who do not believe that time inconsistency of monetary policy is a major problem, such as Blinder (1999). On the contrary, foreign policy is an area where it is very difficult to describe ex ante reasonably precise and fixed policy goals; in a changing world the preferences of the public may change substantially. Just think of how preferences for foreign policy changed in the US before and after September 11, 2001. Hence, from a perspective of economic efficiency, it should remain under political control. Finally, much of fiscal policy has a redistributive nature and could be a source of political rents. Our positive analysis predicts that politicians will prefer

[6] Obviously monetary police has redistributive consequences as well (think of debtor and creditors) but at least in recent decades the main goal of monetary policy is inflation control and output stabilization. Often the redistributive consequences of monetary policy are either unexpected or a source of time inconsistency (think of devaluation of the public debt).

to maintain control over fiscal policy, as we normally observe in practice.

Our paper is of course related to the vast political science literature asking the positive question of why legislative powers are delegated in practice, what the effect of delegation is, the "bureaucratic drift" etc. - see Epstein and O' Halloran (1999). This literature, mostly focused on the US, is filled with interesting controversies. Some authors (Lowi (1969) amongst others) argue that delegation is deleterious, an abdication of the legislators' responsibility and a way of favoring special interests (Stigler (1971)). Other authors (Mc Cubbins, Noll and Weingast (1987, 1989)) instead claim that the legislators can, at least up to a point, control the bureaucratic agencies by means of procedural rules. Carpenter (2001) dissents and argues instead that the rise of the regulatory state has given a large latitude to many bureaucracies to decide in addition to implement legislation.

But then, if the control of politicians over bureaucrats is imperfect, that is if the agencies can act following their own motivations, why delegate at all? One answer is "optimistic" and relates to the need for division of labor, reduction of effort for the legislators etc.. Others are more cynical: Epstein and O' Halloran (1999) argue that the type of delegation chosen is the one that maximizes the benefits for elected politicians rather than social welfare; this is precisely what we model

in the positive part of our paper. Fiorina (1977) points out the blame shifting role of delegation: politicians delegate to agencies in order to blame them when things go badly and claim responsibility when success occurs. We derive this result formally but we point out a trade off between using bureaucrats as scapegoat and rent extraction.

Our paper is also related to several recent contributions that have investigated the role of career concerns rather than explicit contracts. Dewatripont, Jewitt and Tirole (1999a,b) discuss the foundations of this approach and apply it to study the behavior of government agencies. They focus on some issues related to ours, namely the nature and "fuzziness" of the agencies mission, but they do not contrast bureaucratic and political accountability. Dewatripont and Tirole (1999) study the role of advocates that provide information and opinion to policymakers, and discuss how the career concerns of advocates may improve policymaking. Maskin and Tirole (2001) investigate the attribution of responsibilities between accountable and non accountable agents. The latter have intrinsic motivations, while the former seek to please their principals because of implicit rewards (career concerns). In our set up, instead, we neglect the role of intrinsic motivations: both bureaucrats and politicians need to be kept accountable with implicit incentives; but the implicit incentive schemes can be of two kinds: those that define a

politician (striving for re-election), and those that define a bureaucrat (career concerns). Schultz (2003) contrasts direct democracy, representative democracy and bureaucratic delegation. Like Maskin and Tirole (2001), he views bureaucrats as unaccountable and focuses on the trade-off between ideological polarization and accountability: bureaucrats are less polarized than partisan politicians, but are more inflexible since they are unacountable and cannot be removed after shocks to the voters' policy preferences. Besley and Gathak (2003) also study intrinsically motivated agents, and focus on how to combine intrinsic motivation with implicit rewards. Besley and Coate (2003) contrast appointed and elected regulators of public utilities; both policymakers' types are intrinsically motivated, but direct election allows the voters to unbundle policy issues.

Another related question is that of privatization of government activities. Hart, Shleifer and Vishny ((1997) in particular discuss when it is preferable to delegate the provision of public goods to private enterprises and when to keep it under control of politicians. Issues regarding incompleteness of the contract between politicians and private providers have close analogies with some of the questions we address below.

The paper is organized as follows. Section 2 describes the simplest case of our model and justifies its assumptions. Sections 3 and 4 discuss

cases of policies with a "public good" nature and with no redistribution. Section 5 reviews the role of bureaucrats in solving time inconsistency problems and in keeping politicians' short termism under control. Sections 6,7 and 8 deal with redistribution and with the role of organized interest groups. Section 9 discusses the positive aspects of our model. The last section concludes.

2 The Model

Consider a society that has to decide whether to assign a certain policy to an elected officer or to a bureaucrat. With the generic term "policymaker" we indicate who chooses policy, so he or she can be either a politician or a bureaucrat. In the simplest possible case we consider a single policy, the result of which is determined by the effort put in by the policymaker and by his ability. Thus, the policy outcome y is defined as follows:

$$y = \theta + a \tag{1}$$

where a represents the effort of the policymaker and $\theta \sim N(\bar{\theta}, \sigma_\theta^2)$ is his random ability. Ability and effort are additive.[7] Citizens care about the policy outcome according to a well behaved, concave utility function,

[7] Alternatively they could be multiplicative leading to more complicated algebra but similar results. See Dewatripont, Jewitt and Tirole (1999b).

$U(y)$. For the moment we consider linear preferences, $U(y) = y$, since the strict concavity of the utility function does not affect the nature of the results and simply makes the notation more cumbersome. We introduce strict concavity later when it matters.

Effort is costly, and the strictly convex and increasing cost is labelled $C(a)$. The reward for the policymaker is labelled $R(a)$ and it differs depending on whether the policymaker is a politician or a bureaucrat. Both of them maximize their utility defined as:

$$R(a) - C(a) \tag{2}$$

with $C_a > 0$, $C_{aa} > 0$ and $R(a)$ to be defined below (subscripts denote partial derivatives). Note that our model can be restated in terms of rent extraction instead of effort. That is define $a = -r$ where $r > 0$ are rents and $V(r)$ (with $V_r > 0 \;\; V_{rr} < 0$) as the utility of rents which would be of course added to $R(.)$. So every time we say below that the policymakers "chooses how much effort to put in" we can reinterpret the statement as choosing "how much rent to extract." The marginal cost of effort would then play the same role of the marginal benefit of rents in the first order conditions. We mostly use the effort terminology and notation which is the one most commonly used in the career concern literature.

The timing is as follows. At the "Constitutional Table" society

chooses who has control rights over the policy (in the simplest case there is only one, there will be multiple policies later). Then the policymaker chooses effort, a, before knowing his ability, θ. Finally nature chooses θ, outcomes are observed and the reward is paid. Irrespective of who has control rights, only the outcome y is observable by the principals, not its composition between effort and ability. Hence the agent's reward can only be based on the policy outcome, y. Note that control over a policy con only be given either to a bureaucrat or to a politician: we do not allow for joint control over policies, or for some checks and balances between the two. We return to this issue below, in section 5.

2.1 The bureaucrat

We posit that bureaucrats are motivated by career concerns. That is, they are concerned with the perception of their ability θ in the eyes of those that may then promote them or offer them alternative job opportunities in the private sector. Therefore the bureaucrat's reward is (the suffix B stands for Bureaucrat):

$$R^B(a) = \mathsf{E}(E(\theta \mid y)) = \mathsf{E}(y - a^e) = \mathsf{E}(\theta + a - \ a^e) \tag{3}$$

where a^e is the public's perception of a.

Equilibrium behavior of the bureaucrat is obtained as follows. First, compute the first order condition with respect to effort, a, taking the expected level of effort a^e as given. Then, impose the equilibrium re-

quirement, that $a^e = a$. By (3) and (2), we obtain:

$$1 = C_a(a^B) \tag{4}$$

where a^B indicates the equilibrium effort of the bureaucrat.

How does this model of bureaucratic behavior differ from that induced by an optimal contract between the voters and the bureaucrat? Section 1 of the appendix shows that, in this simple environment, it does not differ at all (except for the neglect of the bureaucrat's participation constraint, which throughout the paper we assume is always satisfied). But as the policy environment gets more complicated, as in the following sections, career concern incentives do differ from those of an optimal contract. Thus, our model of bureaucratic behavior contains some implicit restrictions on the design of bureaucratic institutions. We are not too apologetic about it, for two reasons. First, as a matter of fact, bureaucrats are typically not motivated by sharp pecuniary incentives and complicated contractual arrangements with society. As others have argued before us, the implicit rewards and the contractual incompleteness offered by career concerns seem a better approximation of observed arrangements, compared to the purified world of optimal contracts - see Wilson (1989) and Dewatripont, Jewitt and Tirole (1999a,b). Second, if indeed society could write unrestricted optimal contracts with its policymakers, then the question of whether political or bureaucratic

delegation is better for the voters would be utterly uninteresting, since bureaucratic arrangements would always dominate.

2.2 The politician

The politicians's goal is to be reelected and he accomplishes this goal if y is above a threshold W. We do not allow any career concerns for the politicians, other than to be reelected. Normalizing to 1 the benefits of office holding we have (the suffix P stands for Politician):

$$R^P(a) = \Pr(y \geq W) = 1 - P(W - a) \tag{5}$$

where $P(W - a) = \Pr(\theta \leq W - a)$. We impose rationality of the voters, so that they expect that the alternative to reelecting the incumbent is to get another one with average talent, who in equilibrium will put the same amount of effort as the current one. In fact every period is identical and the politician's effort choice is made before he observes his talent.[8]

[8] Note that the model could be easily generalized to several periods, if the politician's ability today is a signal of his ability tomorrow but some random element of ability is present every period so that it can never be fully learnt in advance. A widely studied case in the political business ccycle literature is that of a MA (1) process for abiity. Persson and Tabellini (2000) discuss the implications of this political model more extensively.

It follows that:

$$W = \bar{\theta} + a^e \tag{6}$$

With a normal distribution for θ, equilibrium effort by the politician, a^P, is defined implicitly by the first order condition:

$$n(\bar{\theta}) = C_a(a^P) \tag{7}$$

where $n(\bar{\theta}) = 1/\sigma_\theta\sqrt{2\pi}$ is the density of the normal distribution of θ evaluated at its mean.

How does the effort of the politician compare with that of the bureaucrat? Comparing (4) and (7), we see that the answer is ambiguous and depends on parameters' values. Note that $a^P > a^B$ does not automatically imply that the politician unambiguously dominates the bureaucrat from the voters' perspective, however. The reason is that the equilibrium effort of the bureaucrat here coincides with the first best. Hence, the bureaucrat can be worse than the politician only if it earns rents (i.e., if the bureaucrat's participation constraint does not bind, as discussed in section 1 of the appendix). In this case, and if political delegation does not violate the incentive constraint, then whenever $a^P > a^B$ the voters are better off under the politician than under the bureaucrat.

2.3 Discussion

It is important to pause to discuss how these strawmen "politicians" and "bureaucrats" relate to real world cases. Probably the most compelling

example of a "bureaucrat" as modelled here is a Central Banker. His incentives to fulfill his ask are mostly driven by the desire to appear competent, even though even a Central Banker occasionally may bend to the electoral needs of a "politician". Like our "bureaucrat", a Central Banker sets policy without political interferences and his tasks are set by a clear mandate to keep inflation low. An American President is instead the quintessential example of a politician, seeking reelection for himself in his first term and for his party in his second.[9] The paper can be viewed as asking the following questions: from the point of view of economic efficiency, should institutional arrangements such as those relating to monetary policy with an independent Central Bank be extended to other areas of policymaking? And when are such arrangements likely to be chosen by opportunistic politicians?

In practice bureaucrats in charge of important agencies may be preparing a leap into politics, so they may worry about their popularity and not only their competence per se. On the contrary, politicians may look ahead to a career in the private sector. While these caveats point to a large gray area and intermediate cases between our "politician" and our

[9] See Alesina and Spear (1988) for a formal discussion of how a party may create incentive for a second year President to behave as if he were interested in reelection and avoid a "last period" problem.

"bureaucrat", it is useful as a first step to clearly identify how career concerns and electoral incentives lead to different result depending on the nature of the policy in question.

3 Imperfect monitoring

We now move to the case of imperfect monitoring, that is a situation in which performance is not perfectly observable. Thus, we add noise, ε, besides talent (θ) and effort (a) :

$$y = \theta + \varepsilon + a$$

with $\varepsilon \sim N(0, \sigma_\varepsilon^2)$, uncorrelated with θ and unobservable. Only performance y is observed and can be the basis of rewards.

In this case the reward for bureaucrats can be rewritten as:

$$R^B(a) = \mathsf{E}(E(\theta \mid y)) = \bar{\theta} + \beta \mathsf{E}(\theta + \varepsilon + a - a^e - \bar{\theta}) \tag{8}$$

where $\beta = \sigma_\theta^2/(\sigma_\theta^2 + \sigma_\varepsilon^2) < 1$. Given our assumption of normality of the distributions, we obtain a well known signal extraction result. Now the perception of talent is "discounted" by a term β which reflects the signal to noise ratio. In equilibrium the choice of the bureaucrat is given by:

$$\beta = C_a(a^B) \tag{9}$$

Not surprisingly, the bureaucrat puts in less effort the lower is the signal to noise ratio.

Note that, with imperfect monitoring, the career concern contract no longer induces the optimal amount of effort. Given risk neutrality, the optimal contract (under the assumption that the principal only observes y) would still induce the same amount of effort as in (4) above - see also section 1 of the appendix. That is, imperfect monitoring would not add any distortions. But if the bureaucrat can only be rewarded implicitly through career concerns, as we assume, then imperfect monitoring entails a loss of welfare for the voters.

We now turn to political delegation. The politician's reward is given by the same expression as above, except that now the distribution from which the probability $\Pr(y \geq W)$ can be computed has a larger variance, that reflects both the variance of θ and of ε. It is immediate to derive the first order condition of the politician as follows:

$$n(\bar{\theta}, 0) = C_a(a^P)$$

where $n(\bar{\theta}, 0) = 1/(\sqrt{\sigma_\theta^2 + \sigma_\varepsilon^2}\sqrt{2\pi})$ is the density of the random variable $\theta + \varepsilon$, evaluated at the mean of both θ and ε.

We are now ready to establish the following

Proposition 1 *The comparison between a^P and a^B is ambiguous. Imperfect monitoring (high σ_ε^2) reduces effort for both types of policymakers. Higher σ_θ^2 increases a^B but decreases a^P.*

Therefore, less monitoring does not favor one or the other type of policymakers. This result is related to those obtained by Dewatripont, Jewitt and Tirole (1999b), who also point out that performance less closely tied to talent or effort weakens the incentives of agents motivated by career concerns. But note that the same conclusions also apply to a politician. Hence, imperfect monitoring reduces the performance of both policymaker types (relative to an optimal contract), but it does not provide an argument for preferring a politician to a bureaucrat at the constitutional stage.

More uncertainty about the policymaker ability, however, does favor the bureaucrat over the politician. With imperfect monitoring a larger variance of θ actually increases effort of the bureaucrat, while it has the opposite effect on the politician. Intuitively, an increase in the variance of θ increases the signal-to-noise ratio and implies that observed performance (y) is a better indicator of ability (θ). This makes the bureaucrat work harder, since by assumption he fully internalizes the benefit of higher expected ability.[10] The politician, instead, only wants

[10] Here the bureaucrat is risk neutral, which means that his compensation is a linear function of expected ability (conditional on performance). A risk averse bureaucrat would put in even more effort with more uncertainty over θ, if his marginal utility was convex (eg. with iso-elastic utility function, as in the literature on precautionary savings). This

to overcome the re-election threshold (giving the voters more than their reservation utility is a waste). If ability is more uncertain (if σ_θ^2 is high), then re-election prospects are less sensitive to effort, since more of the policy outcome is due to randomness. Hence his incentives are weakened.

This result has a practical and sensible implication: bureaucrats are better than politicians in tasks requiring special abilities or technical competence, that not everyone is likely to have. The reason is not that bureaucrats are more gifted than politicians, but rather that they have stronger incentives to pretend that they are gifted.[11] This implication is strengthened if evaluating the performance of a bureaucrat also requires

would further increase his attractiveness relative to the politician. But the opposite would be true if the bureacrat's marginal utility was concave (in this case more uncertainty over θ could weaken the bureaucrat incentives, if the effect on marginal utility outweighs the effect on the signal to noise ratio).

[11] This result would be reinforced if the extent to which bureaucratic ability is rewarded was also allowed to vary. Tasks where technical abilities matter more are also those for which rewards for ability are higher. For instance, being a good central banker also entails ability in forecasting; if this talent is highly rewarded in the market place, this is an additional reason to delegate monetary policy to a bureaucrat (since it gives a stronger incentive to appear a talented bureaucrat).

special technical abilities - that is, if the extent of imperfect monitoring also depends on who does the monitoring. In the case of politicians, the ultimate judges of performance are the voters at large. The performance of bureaucrats, instead, is mainly evaluated by their professional peers. Hence, imperfect monitoring is less of a problem if politicians are given simple tasks, since bureaucrats can more easily be held accountable by their peers for more technically demanding tasks. Maskin and Tirole (2001) and Epstein and O' Halloran (1999) reach a similar conclusion in different models.

4 Policy tasks in an uncertain world

We now add an element of uncertainty in tasks. In particular, suppose that at the Constitutional Table voters are not sure of how their preferences will evolve. We return to the case of perfect monitoring and we assume that there are two possible policies, that is two different directions in which effort can be devoted to: $y_i = \theta + a_i$, with $i = 1, 2$.[12]

With multiple tasks, which will be our focus from now on, one needs to specify a general cost function with multiple arguments, $C =$

[12] For a general discussion of multi task functions in a principal- agent relationship see Holmstrom and Milgrom (1991). They analyze situations in which incentive schemes need to account for the optimal allocation of effort in different tasks.

$C(a_1, a_2)$. Instead of using the general formulation, we simplify to either an additive case ($C = C(a_1 + a_2)$, where effort in the various tasks is perfectly substitutable in the cost function, or to a separable case ($C = C(a_1) + C(a_2)$), where the marginal cost of effort in one task is totally independent of effort devoted to the other tasks. We choose the simplest formulation that does not produce knife-hedge or "trivial" results. The more general specification of costs generates qualitatively similar results. We begin in this section by considering additive costs, so that $C = C(a_1 + a_2)$.

At the Constitutional Table the (identical) voters are uncertain about their ex post preferences over alternative policies, so that voters utility is now given by the following concave function:

$$U(\lambda y_1 + (1 - \lambda) y_2) \tag{10}$$

with $\lambda = 1$ with probability $q > 1/2$, $\lambda = 0$ with probability $(1 - q)$. Thus, society does not know ex ante what it will like ex post; but there is no disagreement ex post amongst members of society. Disagreements and redistribution will be analyzed below. The timing is now as follows. First, at the Constitutional Table the voters choose whether to assign this policy to a bureaucrat or to a politician, then nature chooses λ, that is social preferences are determined. Then the policymaker chooses $[a_i]$, then nature chooses θ, and finally policy is determined and rewards

paid. We assume that λ is observable but not verifiable.[13]

Choosing a non-elected bureaucrat means that voters decide at the Constitutional Table to assign a task to the bureaucrat. Given that at the Constitutional Table preferences are not yet known, one can only assign to the bureaucrat an unconditional task defined as follows:

$$y = \delta y_1 + (1 - \delta) y_2 \tag{11}$$

where δ is a parameter specified by the Constitution. A crucial assumption is that the parameter δ cannot be contingent on the realization of the random variable λ : the mission for the bureaucrat cannot be contingent on the realization of ex post voters' preferences. This element of contract incompleteness is plausible: A bureaucrat is somebody who is not appointed through the political process, and therefore he will not follow the ebb and flows of changing voters' preferences. The independence of the Central Bank, for instance, means that the central banker does not have to respond to the voters or even their representatives for his policy choices, other than for how he fulfills the goals assigned by the law to the central bank. But these goals can only be formulated in a simple and general way, like keep inflation under control; the central

[13] Aghion Alesina and Trebbi (2002) also study of constitutional design in a case in which social preferences are not fully revealed ex ante. Their model and their emphasis is however quite different.

bank objectives cannot be changed with electoral results, or with the stage of the business cycle.[14]

Under these assumptions, the rewards of the bureaucrats are:

$$R^B(a) = \mathsf{E}(E(\theta \mid y)) = \mathsf{E}(\theta + \delta a_1 + (1-\delta)a_2 - \delta a_1^e - (1-\delta)a_2^e) \quad (12)$$

Given additive costs and $q > 1/2$, it is optimal to set $\delta = 1$.[15] The first order conditions for the bureaucrat imply:

$$a_1^B = C_a^{-1}(1), \qquad a_2^B = 0 \quad (13)$$

That is the bureaucrat focuses all his effort on the "main" activity of his mandate because that is more helpful in signaling his ability. Thus, the voters' utility in equilibrium is given by:

$$U^B = q\mathsf{E}U(\theta + a_1^B) + (1-q)\mathsf{E}U(\theta) \quad (14)$$

The key here is that by choosing a bureaucrat who is non responsive to the ebb and flows of society's preferences, citizens are "stuck" with the

[14] See Alesina and Gatti (1995) for an explicit discussion of insulation of the missions assigned to the central bank form changes in the preferences of the electorate.

[15] If costs were separable, then the optimal δ would be increasing with q, at a rate that is decreasing with the curvature of $U(.)$ for obvious reason having to do with risk aversion. The qualitative nature of our result would not change.

risk that effort is misallocated and the bureaucrat pursues the wrong goals, those that ex-ante seem more likely to be relevant.

This is what differentiates the politician from the bureaucrat. The politician's goals always depend on the realization of λ (i.e., on the preferences of the voters). Thus, knowing λ the politician will devote effort only to the task preferred ex post by the voters according to a first order condition similar to (7) above. The following proposition follows.

Proposition 2 *The politician always chooses the right task from the voters' perspective. This advantage of the politician is more important the more risk averse are the voters and the more uncertain are their ex-post preferences.*

Delegation to bureaucrats is safe when society's preferences are well known and stable. But when they change, the "rigidity" of a bureaucrat's behavior makes the latter much less attractive. This helps us to understand why monetary policy is often delegated to an independent central bank, while foreign policy is typically under the control of politicians. Few would disagree with the statement that the appropriate goal for monetary policy is to keep inflation under control with some room for stabilization policy; and this goal is unlikely to change over time. But preferences regarding foreign policy are unlikely to be stable and unchanged, and as a result an appropriate simple bureaucratic goal can-

not be stated once and for all. The politician, instead, always finds it optimal to follow the ebbs and flows of voters' preferences. In a changing world, this feature of political accountability may be superior to a fixed and unchangeable bureaucratic mission. This is consistent with Wilson's (1989) view that it would be impossible to delegate foreign policy to a non political agency because it would be too complicated to specify tasks in such an area of policymaking so much affected by unexpected contingencies. Hart, Shleifer and Vishny (1997) make a similar argument to clarify why it would be close to impossible to privatize foreign policy.

In these situations, a combination of politicians and bureaucrats could be welfare improving. In fact, a natural remedy to the "narrow-mindedness" of bureaucrats pursuing the wrong task is to let the politician decide the mission of the bureaucrat. Specifically, the constitution could prescribe that policy be delegated to a bureaucrat, but the bureaucrat's mission (the parameter δ in (11) above) be chosen by a politician. If the politician observes the contingency λ and if he is held accountable by the voters as described in the previous section, he would always choose the socially optimal mission for the bureaucrat. This division of tasks (the politician assigns the bureaucrat some goals and the latter chooses the instruments with which to pursue them) is observed in a variety of real world arrangements. An example is the inflation targeting regime

in the UK, where the government periodically assigns an inflation target to the Bank of England and then it does not interfere with the central bank decisions of how to pursue that target. Of course, the precision and frequency with which the goals of the bureaucrat are defined can vary from case to case, and determine the extent to which an independent bureaucrat is really in charge of policy decisions, (rather than taking orders from the politician). In some cases it may be impossible to delegate in any meaningful way simply because the contingencies to specify in the principal agent relationship between politician and bureaucrats are simply too complex.

5 Time inconsistency

The benefit of flexibility associated with political delegation has a cost, when society's preferences are time inconsistent. The rigidity of bureaucratic control, instead, offers protection against time inconsistency. Delegation to an independent agency to gain credibility is extensively used in monetary policy (as captured by Rogoff (1985)). Our model offers a different formalization of this point.

Suppose, again, that there are two tasks, $i = 1, 2$, say fighting unemployment (task 1) and fighting inflation (task 2). Citizens care about both tasks, with simple linear preferences:

$$U(y_1, y_2) = y_1 + y_2 \tag{15}$$

Effective inflation control depends on the policymaker's effort and ability, $y_2 = \theta + a_2$. But equilibrium unemployment also depends on unexpected inflation, a_2^e. Specifically, suppose that the policy outcome in task 1 (fighting unemployment) is given by:

$$y_1 = \theta + a_1 - (a_2 - a_2^e) \tag{16}$$

Thus, low unemployment is brought about by ability and effort in choosing the right labor market policies $(a_1 + \theta)$, but it is also facilitated by an unexpectedly high level of inflation. Other examples can be thought, but whatever the precise economic interpretation, in this model the final outcome depends on the interaction between the policymakers' decisions and the private sector expectations, and this creates a time inconsistency.

Suppose throughout that policy commitments are unavailable, meaning that first private expectations are formed, and then effort in both tasks, a_1 and a_2, are chosen. One can show (see the Appendix for the derivation) that politicians are much more likely to fall into the traps of time inconsistency, compared to bureaucrats. The goals of a politician are unavoidably linked to the ex-post welfare of voters, through reelection motives. The bureaucrat instead can be given an explicit mission, possibly different from whatever is ex-post optimal for the voters. This possibility of strategic delegation enables society to overcome credibility problems. This conclusion is essentially the same as Rogoff (1985).

But our framework shows more clearly another benefit of bureaucratic delegation: it allows separation of tasks. By holding the central bank accountable only for inflation, and by giving the politician the responsibility to fight unemployment, the time inconsistency no longer distorts the policymakers' incentives. In the Appendix we show more precisely the following:

Proposition 3 *Under time inconsistency, the bureaucrat generally does better than the politician, for two reasons: first, the mission of a bureaucrat can be narrowly defined to avoid time inconsistent goals; second, even if this cannot be achieved because tasks cannot be split among separate agencies, the mission of a bureaucrat can be defined strategically to influence private sector expectations, irrespective of what is ex-post optimal for society.*

A related issue has to do with the time dimension of the flow of costs and benefits of different policy tasks.[16] Bureaucrats tend to care more about the long run consequences of policies, compared to politicians, for two reasons. First, often bureaucrats are appointed for longer than

[16] Rogoff (1990), Rogoff and Sibert (1988) and Persson and Tabellini (1990 and 2000) model myopic electoral cycles in monetary and fiscal policy with rational voters.

electoral cycles, precisely to avoid short termist policies.[17] Second, even when bureaucrats have short terms of office, the blame for myopic policies may reach them and hurt them later on. This gives bureaucrats a strong incentive to focus on the long term goal. A politician instead is often interested in winning the next elections and is less worried about repercussions later on in his career. In future elections the main issues at hand may be different and the voters may forget past policy mistakes. Thus, there is an argument for assigning to bureaucrats policy tasks that imply short term costs and/or delayed benefits.[18]

When the short termism of politicians is an issue, the interaction between bureaucrats and politicians can yield welfare improvements. To achieve this, we don't need to put the bureaucrat in charge of policy decisions. It is enough that he knows something about what the politician is doing and acts as a watchdog, conveying his information to the

[17] Long terms of office for the Chairman of the Central Bank are considered a necessary tool to insure independence and a long term horizon in the conduct of monetary policy.

[18] Besley and Coate (2003) find evidence that, in US states, elected regulators tend to keep lower electricity prices compared to appointed regulators. If, as likely, lower prices come at the expenses of lower investments, this finding is consistent with the prediction of short-termism by elected (as opposed to appointed) regulators.

voters. The voters' behavior will then endogenously adjust to induce an opportunistic politician to pursue long term goals. In our framework, the voters do not deliberately punish the politician if he acts myopically. But they do so indirectly, when they exploit the bureaucrat announcement to better understand what the politician is really doing and use this information to reappoint the incumbent only if he is competent enough.[19]

Watchdogs of this type are especially useful to check the government budget. Issues of creative accounting, or unsustainable fiscal policy "hiding" mounting deficits in the social security account, are common examples of short termist behavior that could be flagged by watchdogs. The Stability and Growth Pact, which puts limits on budget deficits of governments of the European Union and is "enforced" by the EU Commission, exploits this role of bureaucrats. Even though national governments may have violated the deficit ceilings without incurring in the fines envisaged by the Pact, the bureaucrats' indications of a violation has raised the voters' attention to issues of excessive deficits. European bureaucrats do not control national deficits, but by raising "flags" they nevertheless exert a strong influence on national policies.

[19] In a previous version of this paper we work out this argument more formally. The derivation is available from the authors.

6 Lobbying and bribing

We now turn to policies which imply conflicts amongst different members of society, broadly speaking redistributive policies with winners and losers. In this section we consider the case of lobbies that can influence the choice of policies with bribes or campaign contributions. Thus here "redistribution" is intended as favors towards powerful minorities. The minority will seek to influence policy decisions to obtain favors. Both the politician and the bureaucrat can be captured by the interest group, but with different mechanisms. This difference can give raise to a constitutional preference for one or the other type of policymaker, depending on the circumstances.

There are two tasks, $i = 1, 2$, both affected linearly by effort and ability, with no spillover effects across tasks: $y_i = \theta + a_i$. The cost of effort is non-separable: $C = C(a_1 + a_2)$. Task 1 benefits the voters at large, while task 2 only benefits a small but organized interest group. Voters influence policy only through elections. The organized interest group can influence policy either through bribes, b, or through campaign contributions, f. Thus, the preferences of voters are just y_1, while those of the interest group can be written as:

$$(1 + \gamma)y_2 - b - f \tag{17}$$

where γ is a parameter capturing the intensity of the group's preferences

for task 2.

Bribes can be offered to both the politician and the bureaucrat, but are illegal. Thus, if a policymaker accepts a bribe, with some exogenous probability q he is caught and pays a fine Z (the interest group is not fined). Campaign contributions are legal and can only be offered to the politician. The effect of campaign contributions is to increase the incumbent's chances of winning the elections. We model this by saying that the voters' reservation utility is a decreasing function of the campaign contributions collected by the incumbent:

$$W = \bar{\theta} + a_1^e - H(f) \tag{18}$$

where the function $H(.)$ captures the effect of campaign contributions. It is natural to assume that $H(0) = 0$, $H_f > 0$, $H_{ff} < 0$. Note that we are assuming that the lobby group is very small and therefore irrelevant from a vote counting point of view. Under these assumptions, we can write the policymaker's preferences as:

$$R(y_1, y_2) - C(a_1 + a_2) + (1 - \phi)b - qZ \tag{19}$$

where $R(y_1, y_2)$ are the policymaker's rewards ($R^B(y_1, y_2) = E(\theta/y_1)$ for the bureaucrat, $R^P(y_1, y_2) = \Pr(y_1 \geq W)$ for the politician), and $1 > \phi > 0$ denotes transaction costs that reduce the value of the bribe for the recipient relative to the amount paid by the interest group. The

policymaker's effort devoted to task 2 is observable by the interest group, so that bribes and campaign contributions can be contingent upon the policymaker effort: $b = B(a_2)$, $f = F(a_2)$. The timing of events is as follows. First the Constitution allocates control rights over policies. Then the organized group commits to bribes and or campaign contributions, as a function of effort. Next, the policymaker allocates effort between the two tasks. Nature then chooses a realization of θ. Finally, rewards are paid.

This is a common agency game, with two types of principals: the interest group and the representative voter. The interest group has all the commitment power and can either influence the agent directly (through bribes), or indirectly (through campaign contributions). The distinction between the politician and the bureaucrat is that the latter can only be influenced by the interest group through bribes. We want to know whether the voters are better off with the bureaucrat or with the politician, and what influences this comparison.

6.1 Bribing the bureaucrat

If the constitution gave all control rights to the bureaucrat we would have a standard common agency game, with a single active lobby. If bribes are positive, then the equilibrium must be jointly optimal for the

organized group and the politician. This immediately implies:

$$a_1^B = 0, \qquad a_2^B = C_a^{-1}(1+\gamma) \tag{20}$$

Moreover, restricting attention to truthful contribution (here bribing) schedules, the equilibrium bribing schedule has the following simple form:[20]

$$B(a_2) = \bar{B} + \frac{1+\gamma}{1-\phi} a_2 \tag{21}$$

where the constant $\bar{B}$ is chosen by the organized group so as to leave the bureaucrat indifferent between accepting or rejecting the bribe. Given the bureaucrat's preferences, this implies:

$$\bar{B} = C(a_2^B) - C(a_1^B) + a_1^B - (1+\gamma)a_2^B + \bar{q}Z \tag{22}$$

where $a_1^B = C_a^{-1}(1)$ denotes the equilibrium policy if no bribe is accepted.

Finally, the organized group must also prefer to pay the bribe rather than be passive. This in turn puts an upper bound on the constant $\bar{B}$ that the organized interest group is willing to pay. Taking into account (22), an equilibrium with positive bribes exists only if the following condition is satisfied:

$$\frac{(1-2\phi)(1+\gamma)}{1-\phi} a_2^B - \left[C(a_2^B) - C(a_1^B) + a_1^B\right] \geq \bar{q}Z \tag{23}$$

If instead this condition is violated, then the equilibrium with the bureaucrat delivers the optimal policy for the voters. Equation (23) makes

[20] See Grossman and Helpman (2001).

it clear that an equilibrium in which the bureaucrat is bribed is more likely if the stakes for the organized group are high (γ is large), or if the legal system works poorly (qZ and ϕ are small).

6.2 Lobbying the politicians

Next, suppose that the politician is in charge of the policy decision. A condition very similar to (23) above determines the existence of an equilibrium with bribes (the expression is not identical because the politician's reward occurs through reappointment). In particular, it remains true that bribes would be zero if the legal system is strong, so that transaction costs are high or the probability of being caught is high. But now, besides bribes, the organized interest group can also resort to campaign contributions. He will choose to do so if campaign contributions are sufficiently effective in swaying the voters.

Specifically, in an equilibrium with campaign contributions, the allocation of effort must be jointly optimal for the politician and the organized group. Thus, the equilibrium must solve the following optimization problem by choice of a_1,a_2 and f, subject to non-negativity constraints on the three choice variables, and taking voters' expectations a_1^e as given, as before.

$$Max \left\{ \Pr(\theta \geq \bar{\theta} + a_1^e - a_1 - H(f)) + (1+\gamma)a_2 - C(a_1 + a_2) - f \right\} \tag{24}$$

The properties of the solution to this problem depend on the slope of the function $H(f)$, i.e., on how effective campaign contributions are in swaying the voters. In the Appendix we consider two cases:

First, if $H_f(0) < 1/(1+\gamma)$, then the equilibrium has zero lobbying ($f = 0$) and the outcome is optimal for the voters ($a_2^P = 0$). In this case, campaign contributions cannot be productive enough, and the organized group will not seek to influence the politician: the group's stakes are too low relative to how much he would have to pay into the electoral campaign of the politician.

The opposite extreme occurs if $H_f(f^*) > 1/(1+\gamma)$, where f^* denotes equilibrium campaign contributions, to be defined below. In this case, campaign contributions are very effective at the margin. Effort is allocated so as to please only the organized group, as in (20) above. And equilibrium campaign contributions are defined implicitly by the optimality condition:

$$n(\bar{\theta} - H(f^*)) \cdot H_f(f^*) = 1 \tag{25}$$

where $n(x)$ is the normal density of θ evaluated at the point x. For this to be an equilibrium, the organized group must benefit relative to the option of not lobbying at all, and this also requires: $(1+\gamma)a_2^P \geq f^*$.

We summarize this discussion in the following:

Proposition 4 *Political lobbying can be an equilibrium, even if bribes*

to the bureaucrat are not. This is more likely if campaign contributions are effective in influencing the voters, but the legal system is strong and effective in discouraging bribes.

Thus, politically appointed policymakers are more easily captured by organized interests compared to bureaucrats, particularly in advanced democracies with a well functioning legal system. The reason is that, to influence a politician, the interest group needs to convince the voters that the politician is doing a good job and deserves to be reelected. The politician will then automatically respond with policy favors to the interest group, since this will help his chances of reelection. To influence a bureaucrat, instead, the organized group needs to engage in illegal or semi-legal activities, and fight against possibly deeply entrenched professional goals and standards of a technical bureaucracy. Policies where the stakes for organized interests are very high, or where redistributive conflicts concern small but powerful vested interests against the voters at large, may thus be more safely left in the hands of the bureaucrat. The regulation of public utilities is a typical example: the long run interests of consumers are easy to identify and the stakes for the utilities' supplier are very high, so that a politician may be more easily captured than an independent regulator.[21]

[21] This efficiency argument in favor of bureaucrats is mitigated if they

Note that this result points to an important difference between advanced and less advanced societies. In advanced societies with a well functioning judicial system, it is relatively easy to enforce the no bribe equilibrium, but campaign contributions may still be very effective at buying policies; hence, bureaucratic delegation works well. In developing countries, instead, stopping bribes might be close to impossible and politicians are likely to do as good a job as bureaucrats.[22]

7 Compensation of losers

One critical task for politicians is to form coalitions in favor of certain policies, compensating losers either with direct transfers or by bundling several policies into one package. To illustrate this point, we need a conflict of interest between voters (or groups of voters) and the possibility of side payments and of bundling policies with complementarities.

Voters' utility now depends on the policy outcome and the transfer (positive or negative) received by the government. We have two voters (or homogeneous groups of voters of equal size) with concave utility

are easier to bribe than the politician., however. And bureaucrats with technical expertise may be more easily bribed than politicians through a "revolving door policy" - i.e. at the end of their public services policymakers are offered lucrative jobs in the private sector.

[22] Glaser and Shleifer (2003) reach a similar conclusion, using a different analytical framework.

defined over private consumption, $U(c_i)$, $i = 1, 2$ and where:

$$c_1 = \ y_1 + t, \qquad c_2 = \ y_2 - t, \qquad y_2 \geq t \geq -y_1 \tag{26}$$

Therefore t is a direct lump sum transfer between voters and the government budget is balanced; there are no tax distortions. Each group benefits from different tasks requiring specific and uncorrelated abilities, θ_i, $i = 1, 2$. Let the distribution of θ_i have the same densities $n(.)$ and cumulative distributions $N(.)$ (not necessarily normal). There are random negative spillovers between the two tasks, such that:

$$y_1 = \theta_1 + a_1 - \lambda\kappa a_2, \qquad y_2 = \theta_2 + a_2 - (1 - \lambda)\kappa a_1 \tag{27}$$

The parameter $0 < \kappa < 1$ denotes the strength of the negative spillover effects. Who is hurt by the spillovers is ex ante uncertain. Thus, λ is a random variable that can equal 1 or 0 with equal probabilities. As in section 4, we assume that λ is observable but it is not verifiable, so that the bureaucrat's mission cannot be defined contingent on λ. Thus, the policymaker maximizes its usual payoffs, with different rewards for the two types of policymakers, except that now we assume that the cost function is additive in the two efforts:

$$R(a_1, a_2) - C(a_1) - C(a_2) \tag{28}$$

Timing has the usual structure. First nature sets λ and this determines which group is hurt by the spillover effect. Then the policymaker chooses a_i and t, nature sets θ_i and rewards are paid.

Consider the politician first. He maximizes reelection probabilities, which means that he has to win the favor of a strict majority of voters. Here this means winning the votes of both groups (as it will be clear below, nothing of substance hinges on the fact that in this simple example reelection requires pleasing all voters). Therefore:

$$R^P(a_1, a_2) = \Pr ob(U(c_1) \geqslant W_1) * \Pr ob(U(c_2) \geqslant W_2) \tag{29}$$

where W_i is the reservation utility of group i.

Suppose for concreteness that $\lambda = 1$. If the two reservation utilities are equal, then the politician sets transfers t so that:

$$\frac{n(x_1)}{1 - N(x_1)} = \frac{n(x_2)}{1 - N(x_2)} \tag{30}$$

where $x_1 = U^{-1}(W) - t - a_1 + \kappa a_2$ and $x_2 = U^{-1}(W) + t - a_2$. That is, the politician equalizes the "hazard rates" of losing votes from either group. In this context, the hazard rate measures the elasticity of the probability of winning with respect to transfers. Thus, this optimality condition is similar to the Ramsey rule of optimal taxation: transfers are allocated between groups so as to equalize this elasticity across groups. If the hazard rate is monotonically increasing in x, and given the assumption

of the same distribution for θ_i, $i = 1, 2$, equation (30) implies $c_1 = c_2$.[23] That is, the politician implements full insurance, fully compensating the losers from the negative externality (remember that compensations are costless, if they entailed a transaction cost or a tax distortion the equalization of utilities would no be complete).

Exploiting (30), the optimality conditions for the allocation of effort to the two tasks imply:

$$n(1 - N_2) = C_a(a_1^P) \tag{31}$$

$$n(1 - N_1)(1 - \kappa) = C_a(a_2^P)$$

Thus, the politician allocates effort "correctly", in the sense of devoting more effort to the task that does not have negative spillovers: $a_1^P > a_2^P$ if $\lambda = 1$. Comparing (31) with (7) in section 2, however, we see that the politician is induced to put less effort also in the task with no negative externality (task 1), relative to the simple case of only one task. The reason is that bundling of two tasks requiring different abilities weakens his incentives. His likelihood of reelection now depends on his success in both tasks. Even if he puts a lot of effort in task 1, he could still loose the election because he happens to be unable in task 2. His awareness of this risk (captured by the term $(1 - N_2)$ on the left hand side of (31)),

[23] A uniform distribution of θ satisfies the assumption of a monotonically increasing hazard rate, for instance.

dilutes his incentives.[24]

Let's now turn to the bureaucrat. By assumption, the measure of performance that he is assigned (and on the basis of which is career-incentives are determined) cannot be contingent on λ and has to be stated at the Constitutional Table. The natural measure of performance in this context is total output, $(y_1 + y_2)$. If given this goal, the bureaucrat allocates effort efficiently, taking the negative externality into account:

$$1 = C_a(a_1^B) \tag{32}$$

$$1 - \kappa = C_a(a_2^B)$$

Nevertheless, compensating transfers will be set to zero.[25]

Comparing the politician and the bureaucrat, we thus have:

Proposition 5 *The politician provides side payment to compensate losers but has weaker incentives than the bureaucrat; the latter, however, does not compensate losers.*

[24] Persson and Tabellini (2000) and Seabright (1996) elaborate further on this point comparing centralized vs decentralized arrangements.

[25] Implicitly, therefore, we are also assuming that social welfare $(U(c_1) + U(c_2))$ cannot be specified as the bureaucrats' mission because it is too vague a concept, or cannot be observed by outsiders to infer the bureaucrats' talent.

This result relies on the fact that bureaucrats cannot be given state contingent missions, and if their goal is formulated in terms of aggregate efficiency, they will neglect the distributional consequences of their actions. A politician instead can take advantage of relatively complex and evolving spillovers between issues and build majorities with complex side payments schemes. Compensating the losers makes it easier to pass legislation while at the same time providing insurance against bad luck. Imagine a policy that favors a large majority, say a badly needed highway, but that creates losers, say the property owners. Under democratic choice, the losers might be able to block the project. But the politician can put together a package of compensation for the property owners, with large benefit for the majority. In a sense this is almost what describes the job of a politician. Instead, it is hard to imagine how a bureaucrat might do that. How can one write on paper what a bureaucrat is allowed to do or not do, to create bundling and compensation? A bureaucrat can be delegated the task of building the best possible highway and he may potentially do a better job than the politician; but he may not have the ability, interest or authority to provide compensation to the local owners. Note also that "writing some checks" to compensate groups of losers does not require any particular technical competence, another reason why it may be difficult to generate the correct incentives

for career-concerned bureaucrats. This observation leads us directly into the next section.

8 Splitting the cake

We now consider a purely redistributive policy, "cake splitting". Consider three voters, the minimum number required to make the problem interesting. The policy task delivers a "cake" that can be divided between the three voters, therefore:

$$y = \theta + a = c_1 + c_2 + c_3 \tag{33}$$

The utility function of the voters is concave, $U(c_J)$, $J = 1, 2, 3$. We start with risk neutrality, $U(c_J) = c_J$, and comment below on how the results would change with risk averse voters.

The key difference between a politician and a bureaucrat is, once again, that the former needs a majority to win and the latter simply wants to signal talent. Consider the bureaucrat first. At the constitutional stage, the bureaucrat can either be given no redistributive tasks, in which case redistribution is entirely arbitrary - we call this an "unfair" bureaucrat. Alternatively, behind a veil of ignorance he can be assigned the task of redistributing equally, that is $y/3$ for all three voters - we refer to this case as a "fair" bureaucrat. But irrespective of whether he is "fair" or "unfair" (i.e., of how he splits the cake), his talent is still

judged by the aggregate measure of performance, y, not by how he redistributes. His first order conditions are thus identical to those in (4), section 2.

Next, consider the politician. Since he only needs to please a majority, he gives $y/2$ to two voters and zero to the third one. Hence, his reward is:

$$R^P(a) = \Pr ob(y/2 \geq W) \tag{34}$$

where W is the reservation utility of individual voters. Implicit in (34) is the assumption that voters expect that the incumbent, if re-elected, will maintain the same redistribution observed today - i.e he will split the cake in half between the voters who re-elect him. With forward looking and rational voters, W equals the average expected utility they can get if the opponent is elected. If the hypothetical redistribution implemented by the opponent is unknown, then $W = 1/3(\overline{\theta} + a^e)$. Going through the usual steps, of maximizing with respect to effort for given expectations and then imposing rational expectations, in equilibrium the politician's optimality condition implies:

$$n\left(\frac{2\overline{\theta} - a^P}{3}\right) = C_a(a^P) \tag{35}$$

where $n(x)$ denotes the normal density evaluated at the point x. Comparing (35) with (7) in section 2, we see that once the politician is also in charge of redistribution, he can get away with less equilibrium effort,

compared to the case of no redistribution. The reason is that here he only needs to please two voters out of three. He can thus reduce effort, and still please two voters with the portion of the cake taken away from the minority.[26] Note the asymmetry: voters expect the incumbent to preserve the observed redistribution over time, but they are uncertain about how the opponent would redistribute. This asymmetry creates an incumbency advantage and dilutes the politician's incentives: the voters are more willing to reappoint the incumbent even if he is incompetent, because they benefit from his redistribution.[27] Here we assumed a very stark asymmetry: no uncertainty at all about how the incumbent will redistribute, and maximal uncertainty about the opponent. But the nature of the results would be preserved with less stark assumptions, as long as the voters are more uncertain about the redistributive policies of the opponent compared to those of the incumbent.

[26] This result is similar to that obtained in Ferejohn (1986) and Persson and Tabellini (2000). But since here voters are forward looking, we rule out the Bertrand competition among voters that instead features in the backward looking voting equilibrium of Ferejohn (1986).

[27] Indeed, if the voters' reservation utility was $W = (\overline{\theta} + a^e)/2$ (i.e if they were certain to be included in the winning coalition by the opponent), then the effort of the incumbent would coincide with (7) and there would be no dilution of effort due to redistribution.

Given these results, who is better for the voters behind the constitutional veil of ignorance, the bureaucrat or the politician? If voters are risk neutral, and given that they ignore the redistribution chosen by the politician, they only care about aggregate performance, y. This makes the bureaucrat more attractive for the voters for a larger range of parameter values, compared to the case of simple non-redistributive tasks in section 2. With risk averse voters, the comparison between bureaucrat and politician also depends on whether the bureaucrat is "fair" or "unfair". A "fair" bureaucrat is even more attractive compared to the politician, not only because he is likely to put more effort, but also because he is less risky - the politician exposes the voters to the risk of being in the minority.[28] But the result may be reversed if the bureaucrat is "unfair" and implements a totally arbitrary redistribution. In this case, political redistribution is less risky, since two voters out of three are always included in the winning majority. The case of an "unfair" bureaucrat seems more plausible, since in a complex world it is difficult to precisely assign redistributive task to a bureaucrat.

[28] Maskin and Tirole (2001) also point out the "tyranny of the majority" or the expropriation of minorities is one reason why politicians may do worse than non-elected officials (unaccountable "judges" in their context).

We can summarize this discussion in the following:

Proposition 6 *The possibility of redistribution reduces the equilibrium effort of the politician, but not that of the bureaucrat. Risk aversion makes the bureaucrat more or less desirable ex-ante depending on how easy it is to impose fair treatment of all voters in his task description.*

9 Positive analysis

So far we asked what is the optimal task allocation from the voters' point of view. We now turn to the positive question of how tasks are likely to be allocated in practice. Bureaucratic institutions, although stable over time, are not typically spelled out in the constitution. They are chosen in the course of the regular legislative process by the politicians in office. Hence, criteria of political expediency dominate this choice. What does this imply for actual (as opposed to optimal) task allocation? Do electoral considerations push politicians to design efficient institutions (i.e. institutions that are optimal for the voters)? And if not, are there systematic deviations from optimality? A voluminous "positive" and empirical literature in political science investigates whether or not and why the American Congress delegates; it discusses when delegation is in the electoral interests of politicians, and when it also maximizes social welfare. The answer generally depends on how the voters evaluate the politician who has appointed a bureaucrat to perform a certain task. The results

that follow shed light on several of the point discussed informally in this literature.

In the formal analysis, we let the politicians choose what to delegate and what not. In reality, bureaucracies themselves "fight" for more and more autonomy, and sometimes are successful even against the will of politicians. (Carpenter 2001). But the determination of politicians to retain control varies across tasks. Our results help us understand why politicians are more willing to fight for some tasks than for others.

9.1 When do politicians delegate?

We start by asking what are the general criteria that induce politicians to delegate tasks to independent agencies. To preserve comparability with the previous results, we retain the same theoretical framework. Specifically, suppose that there are two tasks, $i = 1, 2$, requiring task specific abilities (θ_i) and efforts (a_i) :

$$y_i = \theta_i + a_i$$

The two task-specific abilities, (θ_1, θ_2), are independently distributed according to a normal distribution with mean $\bar{\theta}$ and variance σ_θ^2. The costs of effort are additively separable $(C(a_1) + C(a_2))$ and there are no spillover effects, so that voters' utility is $U(y_1 + y_2)$. We start with the simpler case of risk neutral voters: $U(y_1 + y_2) = y_1 + y_2$ - this assumption is relaxed below. Remember that we can interpret the effort costs

identically as the utility of rents with a simple redefinition of variables.

The timing of events is as usual: first tasks are allocated at a constitutional stage, then the policymaker in charge chooses effort (without knowing his own abilities), then performance is observed, rewards are paid and elections take place. The only difference is that now, at the constitutional stage, task allocation is chosen by the politician rather than by a benevolent planner. The term "constitutional stage" is not quite appropriate in this case, but we retain it for the sake of a clear comparison with the analysis of efficient arrangements. For simplicity, and without loss of generality, we assume that, at the constitutional stage, the politician faces a binary choice: either he delegates task 2 to an independent bureaucrat, or he keeps it for himself; task 1 is instead restricted to always remain with the politician.

The voters' behavior is a crucial determinant of the constitutional choices. This in turn depends on what the voters know. We assume throughout that voters observe the constitution and fully understand its implications (alternative assumptions are discussed below). Thus, constitutional choice is equivalent to a choice amongst equilibria, except that the perspective is that of the politician rather than the voters.

With rational voters, we also need to spell out whether the constitution is expected to remain in place only in the current period, or also

in the future. In line with the observation that bureaucratic institutions can be changed through ordinary legislation, we assume no constitutional commitment: the constitution in place today could be changed after the elections. Thus, an equilibrium constitution is defined as a task allocation that meets two requirements: first, it is optimal for the incumbent politician at the constitutional stage, given the voters' expectation of the constitution in place after the elections. Second, the voters' expectations are fulfilled.

Section 3 of the appendix proves that:

Proposition 7 *If voters are risk neutral, then in equilibrium the probability of reelecting the incumbent politician is always 1/2, irrespective of the constitutional choice. Hence, the politician chooses the constitution that minimizes his equilibrium costs - or more generally, that maximizes the equilibrium rents from being in office.*

Proposition 7 makes clear that electoral concerns do not drive constitutional choice in this framework with risk neutral voters. The reason is that voters condition re-election on policy performance, but not on constitution design. This in turn follows from the assumption that voters are rational and understand the implications of alternative constitutions, while they are imperfectly informed about the policymaker's ability in carrying out his policy tasks. Given this assumption, policy (but not

constitutional choice) reveals the policymaker's ability. Given that the probability of re-election is always 1/2 irrespective of the constitutional arrangement, the only criteria governing constitutional choice by the politician concern the costs of effort (or more generally the rents associated with each task). Specifically, if performing task 2 according to the voters' expectations is costly, then the politician prefers to delegate it away. If instead retaining control of task 2 allows the politician to grab political rents in equilibrium, then he prefers not to delegate it. Note that equilibrium effort by the politician in each task is lower (rents are higher) if he retains two tasks rather than with a single one. The intuitive reason is that the politician is less accountable: with two tasks there is a "bundling" problem, and voters cannot punish poor performance in only one of the two tasks. Since ex-ante the politician is uncertain about his abilities in both tasks, his incentives to please the voters are weaker than if he has control of only one task.[29]

Alternative assumptions would deliver different results relative to Proposition 7. In particular, if voters were un-informed about task allocation, or if institution design also signalled the politician's ability, then the result in Proposition 7 need not hold. But the assumption that voters only hold politicians responsible for the tasks that they have retained,

[29] Proof of this result is available upon request.

and adapt their expectations to what politicians in the opposition would deliver (i.e. to what is "politically feasible") seems reasonable to us. The implications of this result are far reaching: if constitutional choice does not influence the election outcome, then voters' welfare is not a relevant determinant of constitutional choice. Politicians will get rid of tasks that require attention and costly effort, while they will retain tasks that allow them to grab political rents. The issue of what is in the voters' interests simply does not enter the political calculus of costs and benefits.

What does this argument imply about delegation in general? Is there a political bias towards too much or too little bureaucratic delegation, relative to the optimum? The general answer is that politicians will try to retain ultimate control (so as to appropriate rents), but delegate execution (so as to get rid of effort and costs). In other words, bureaucrats stay up at night and do the hard work, while politicians grab the rents. Thus, the model predicts that we should observe extensive delegation to bureaucrats directly controlled by politicians, but too little delegation to really independent bureaucrats.

9.2 Redistribution

Many policies have redistributive implications: would politicians delegate those? Suppose that there are only two tasks and the politician is constrained to keep one task for himself and to delegate the other one to

an independent bureaucrat; but he gets to choose which task to retain and which one to delegate. Task 1 is a simple task, that gives all voters the same utility: $y_1 = \theta_1 + a_1$. Task 2 also gives the policymaker the ability to choose the allocation of benefits among three groups of voters indexed by J, as in the cake splitting example of section 8; thus voter J utility from this task is c_J, and the policymaker is constrained to set $\sum_J c_J = \theta_2 + a_2$.

Our question is which of these two tasks is kept by the politician, and which one is delegated. As in the previous subsection, we assume that voters know the constitution and hold the politician accountable only for the policy task under his control. It is easy show that:

Proposition 8 *The politician always retains control of the redistributive task*

This result is really a direct implication of the analysis carried out in section 8. As shown in that section, and under the same assumptions about the political system, the redistributive task allows the politician to increase the equilibrium probability of re-election above 1/2, while putting less effort to please the voters. Hence it is always preferred compared to a non-redistributive task. The intuitive reason is that redistribution gives the incumbent an advantage, because the redistributive policies of the opponent are unknown, or less well known than those of

the incumbent. This seems reasonable in practice. An incumbents has had an opportunity to credibly build coalitions; an opponent can make promises while out of office, but he does not have the same credibility.

What about tasks that touch the interests of organized groups? Here too, the politician has a preference to retain them. As shown in section 6, if the politician is in charge of these tasks, in the equilibria with political lobbying he receives campaign contributions, which increases his probability of re-election above 1/2 (see (25)). Hence, the model predicts a reluctance of politicians to delegate tasks that affect powerful economic interests, particularly if they are likely to generate campaign contributions.[30] Here there is a stark contrast between what is socially optimal and what is optimal for an opportunistic politician. If illegal bribes can be prevented, bureaucratic delegation would be socially optimal, but would be opposed by politicians interested in extracting campaign contributions from lobbies.

[30] In the equilibrium in which the politician receives bribes (rather than campaign contributions), he is strictly indifferent between delegating to a bureaucrat or not (since the optimal bribe by the lobby would leave him indifferent). But with more than one organized group, the politician can extract rents from the lobbies, and he would strictly prefer to retain control rather than delegate.

9.3 Risk averse voters

Proposition 8 above was derived under the assumption that voters are risk neutral. We now consider risk averse voters, and ask what this implies for the politician's incentives to delegate to an independent bureaucrat. In particular, we ask whether the politician is more keen to delegate risky or safe tasks (a risky task is one in which performance is also determined by nature, and not just by the policymaker's effort and ability).

There are two tasks and the politician has to choose which one to delegate to an independent bureaucrat (i.e., for simplicity we restrict his choices so that he cannot retain control of both tasks). Task 1 is "safe" and gives voters utility $y_1 = \theta + a$. Task 2 is "risky", in that performance (and voters' utility) also depends on a random exogenous component: $y_2 = \theta + a + \varepsilon$; as in the case of imperfect monitoring of section 3, voters only observe y_1 and y_2, but do not observe ε. For simplicity, the required ability, θ, is the same in the two tasks. We only consider the case in which voters expect that, *after the elections*, the constitution will give the safe task to the politician. The opposite case (of a future constitution that gives the politician control over the risky task) yields the same conclusions.

Suppose that, at the constitutional stage, the politician retains the

safe task and delegates the risky one. His ability θ is then fully revealed to the voters when they observe y_1. At the election, the voters thus anticipate that re-electing the incumbent gives them utility $U(\theta + a^e)$. Voting for the unknown opponent, instead, gives the voters an expected utility of $EU(\theta+a^e)$, where the expectations operator is over the random variable θ. The equilibrium probability of re-appointment is thus:

$$\Pr\left[U(\theta + a^e) \geq EU(\theta + a^e)\right] \tag{36}$$

where now the probability refers to the random variable θ (since the incumbent still ignores his own ability when setting policy and when choosing the constitution). If $U(.)$ is strictly concave, the probability in (36) is clearly above 1/2, the more so the greater is the uncertainty over θ and the more concave is the utility function.[31] In other words, when voters are risk averse, the incumbent enjoys an electoral advantage. The reason is that the voters know more about the incumbent than about the opponent, and this makes them more reluctant to switch. But the size of the incumbency advantage depends on which tasks are retained by the politician.

Specifically, suppose that, at the constitutional stage, the politician delegates the safe task and retains the risky one. Now, the voters can no

[31] This can be seen by noting that $\Pr\left[U(\theta + a^e) \geq U(\bar{\theta} + a^e)\right] = 1/2$, and that $EU(\theta + a^e) < U(\bar{\theta} + a^e)$ by strict concavity of $U(.)$.

longer infer the incumbent ability from their observation of y_2. Reappointing the incumbent thus gives the voters an expected utility of $E(U(\theta+a^e) \mid \theta+\varepsilon)$, where the expectations operator refers to the expectation over θ, conditional upon observing $\theta+\varepsilon$. The expected utility of voting for the opponent, instead, is unchanged (by the assumption that there is no constitutional commitment and after the election the politician retains the safe task for himself). Hence, the equilibrium probability of reappointment is:

$$\Pr\left[E(U(\theta+a^e) \mid \theta+\varepsilon) \geq EU(\theta+a^e)\right] \tag{37}$$

where now the probability refers to the random variable $\theta+\varepsilon$. By strict concavity of $U(.)$, and since the unconditional mean of ε is 0, we have that $U(\theta+a^e) > E(U(\theta+a^e) \mid \theta+\varepsilon)$ for all values of θ. Thus, the probability in (37) is strictly smaller than that in (36) - i.e. the incumbency advantage is smaller if the politician retains the risky task rather than the safe one.

We cannot conclude from this comparison that the politician prefers to retain the safe task for himself, however. The reason is that equilibrium effort is generally higher under the safe task: since the politician faces less uncertainty, he finds it optimal to put more effort into the safe task than in the risky one. This can be seen by adapting the analysis of section 3 to the case of risk averse voters.

We summarize the foregoing discussion in the following:

Proposition 9 *The constitutional choice between the safe and the risky task entails a trade-off between votes and rents (or effort). By keeping the safe task and delegating the risky one, the politician increases his incumbency advantage but reduces equilibrium rents (equivalently, he increases equilibrium effort).*

Thus, when voters are risk averse, electoral concerns do influence constitutional choice, contrary to the case of risk neutral voters. But this does not push the constitution towards greater efficiency for the voters. It simply makes the politician more willing to delegate risky tasks. Intuitively, the politician is aware that risk averse voters punish bad luck more harshly than they reward good luck. He thus prefers to leave this risk to the bureaucrat. In a sense, the bureaucrat acts as a "scapegoat" for the politician, as suggested by Fiorina (1977). This incentive is tempered by the opposite considerations concerning rents (or effort), however, since more risky tasks are also associated with greater rents.

Sometimes scapegoats for politicians can be welfare improving, since they take the blame for "unpopular" but needed policies. In Europe, national politicians often publicly blame bureaucrats in the European Commission that tie their hands, but in private they sometimes welcome these constraints and may even suggest to the Commission how

to formulate its recommendations. A similar role may be served by other international bureaucracies, such as the IMF, when it prescribes "unpopular" policies to macroeconomically unstable countries (Vreeland 2003).

Proposition 9 is also relevant for other institutional choices besides delegation, and in particular for the design of more or less transparent procedures for policy formation. Transparency of public policy is an important dimension of institutions and it a choice variable. Politicians can make a policy process more or less transparent. In this choice, they are likely to face a trade-off similar to that summarized in Proposition 9. More transparency has the benefit of increasing the incumbency advantage, because the voters are better able to assess the qualities of the incumbent, while they know less about the opponent. But more transparency is also likely to reduce equilibrium rents, because the punishment for rent extraction is more severe. Depending on which incentives are likely to prevail, politicians will choose more or less transparent procedures. An interesting application of this idea is to the budget process. In many countries the government budget is very non transparent and this is considered a "problem" from the point of view of optimality of institutions. But the degree of budget trasnparency. is entirely endogenous and it is the result of politicians' strategic choices. In fact the

government budget is the primary source of rents broadly defined for politicians. Otherwise there would be no reason not to simplify the budget documents and the budget process.[32]

10 Conclusions

Our analysis rests on two fundamental assumptions. The first one concerns the motivation of different types of policymakers. Bureaucrats want to signal their competence for career concerns, politicians for reelection purposes. The second assumption is that the tasks for bureaucratic agencies have to be specified ex ante and cannot be contingent on the realization of too many shocks on the environment and/or on the public's preferences. If one accepts these two hypotheses, the nature of our results is quite robust to variations on other less important assumptions.

From an efficiency perspective, these differences between bureaucrats and politicians imply that some policy tasks, but not others, ought to be delegated to independent agencies. Consider first policies with few re-

[32] See Alesina and Perotti (1999) for a survey of the literature on budget institution and of transparency. Alesina and Cukierman (1991) discuss a different model in which also the degree of transparency can be chosen endogenously by politicians who would not always choose the maximum level of this variable.

distributive implications, such as monetary policy or foreign policy. Bureaucrats are likely to be better than politicians if the criteria for good performance can be easily described ex-ante and are stable over time; if good performance requires special abilities and performance evaluation presupposes some technical expertise; if political incentives are distorted by time inconsistency or short-termism. Monetary policy indeed fulfills many of these conditions, and the practice of delegating it to an independent agency accords with some of these efficiency results. Foreign policy does not, because the criteria for good performance are unstable and more vague, and the benefit of insulating policy from the political process are smaller.

Next, consider policies that have redistributive implications, such as trade policy, regulation, or fiscal policy. Here, bureaucrats perform well if the policy consequences touch narrowly defined interest groups, if criteria of good performance can be easily formulated and assessed in terms of efficiency, and if the legal system is strong. Politicians instead are better if the policy has far reaching redistributive implications, if criteria of aggregate efficiency do not easily pin down the optimal policy, and if there are interactions across different policy domains (so that a single measure of performance is affected by several policy instruments and policy packaging is important). Regulation of public utilities or of specific

industries are examples of policies that lend themsleves to bureaucratic delegation, since they pit special interests against those of consumers as a whole, do not have large spillover effects, and policy performance can be evaluated on the basis of efficiency or other semi-technical criteria. Trade policy might fall in this cathegory too, although here the redistributive implications are more pronounced. Welfare state policies, instead, have such broad redistributive implications that it seems risky to subtract them from the political process, as suggested by our example on cake splitting. But there are specific aspects of fiscal policy that would certainly meet our efficiency criteria for bureaucratic delegation: for instance, detailed tax policy provisions, or intertemporal fiscal policy choices where time inconsistency or political myopia is an obvious issue, as suggested by Blinder (1997).

Overall, the analysis from the perspective of economic efficiency suggests that there is ample scope for bureaucratic delegation to improve over political delegation, particularly if politicians remain in charge of defining and correcting the general mission of independent agencies. But these conclusions are not likely to be reflected in observed institutional arrangements. There is no reason why opportunistic politicians should internalize these efficiency criteria. Actual institutions are more likely to be designed so as to deliver maximal rents at the lowest risk for the

incumbent politician. This argues for retaining under political control policy tools that are useful to build winning coalitions or to generate campaign contributions, such as trade policy or much of fiscal policy. It also means that politicians might want to get rid of tasks that expose them to risk, such as monetary policy. But this "risk shielding" is possible only if bureaucratic delegation is complete, so that the blame for policy failure lies with the independent agency and not the politician. This might explain why it is politically so difficult to exploit delegation to independent agencies in fiscal policy. Full bureaucratic delegation of fiscal policy is inconceivable, for efficiency and positive reasons. But partial delegation of narrowly defined technical tasks in fiscal policy is politically unfeasible, no matter how desirable. The reason is that voters would still hold the politician accountable, as long as he retains some control (i.e. unless the delegation is complete). And if he is held responsible, then the politician loses any incentive to delegate control.

Appendix

1. Optimal contracts with bureaucrats

Consider the model of section 2. It is easy to show that the first order condition (4) also implicitly defines the first best level of effort in a contract between voters (the principals) and the bureaucrat (the agent) in

which effort is observable and contractible. Since voters and bureaucrat are risk neutral, this first best can be achieved with an optimal contract even if effort and ability are not separately observable. Such optimal contract would reward the bureaucrat with a simple linear payoff:

$$R(y) = y - b$$

where the constant b is defined by the agent's (ex-ante) participation constraint, namely by the condition that

$$\mathsf{E}(R(y)) - C(a) \geq 0 \tag{38}$$

Under the optimal contract, the participation constraint must bind, and given (1) and (38), this implies: $b = \bar{\theta} + a^* - C(a^*)$ where a^* denotes first best effort as defined in (4).

Thus, in this simple model of section 2, the implicit reward offered by career concerns induces the same level of effort as the optimal contract, but there is no guarantee that the participation constraint on the agent binds or is even satisfied. Throughout, we assume that $\bar{\theta} \geq C(a^*)$. Given the reward function in (3), this insures that the participation constraint for the bureaucrat is satisfied. Of course, if the above inequality is strict, then the bureaucrat enjoys some positive rents under the career concerns contract, that he would not enjoy under the optimal contract (i.e. the voters ought to tax the bureaucrat when he is appointed).

2. Time inconsistency

There are two tasks, $i = 1, 2$, and:

$$U(y_1, y_2) = y_1 + y_2 \tag{39}$$

For task two $y_2 = \theta + a_2$. But y_1 depends also on private sector expectations, a_2^e.

$$y_1 = \theta + a_1 - (a_2 - a_2^e) \tag{40}$$

Suppose throughout that policy commitments are unavailable, meaning that first private expectations are formed, and then effort in both tasks, a_1 and a_2, are chosen. In order to stress the difference between the bureaucrat and the politician, suppose now that costs are additive: $c = C(a_1) + C(a_2)$. The politician allocates effort so as to maximize:

$$\Pr(y_1 + y_2 \geq W) - C(a_1) - C(a_2) \tag{41}$$

taking the voters' reservation utility, W, and the private sector expectations, a_2^e, as given. In equilibrium, $W = 2\bar{\theta} + a_1^e + a_2^e$. Taking the first order optimality conditions for the politician and imposing rational expectations, yields the following result:

$$\frac{1}{2} n(\bar{\theta}) = C_a(a_1^P) \tag{42}$$

$$a_2^P = 0$$

Equilibrium effort on task 1 is determined by the same condition as in section 3, except that the left hand side is divided by 2 because now task 1 only contributes 50% to improve the politician's chances for re-election. But the politician exerts no effort at all on task 2 because ex-post the benefit for the voters from this policy outcome are exactly offset by the negative effect on the performance of task 1. Since voters assign equal weights to both tasks, and effort is costly, the politician ex-post prefers to do nothing. Of course, this is suboptimal from an ex-ante perspective: only unexpectedly high a_2 hurts the performance of task 1, and under rational expectations the voters would be better off if the politician could commit to exert high effort also in task 2, and expectations were formed accordingly. Overall voters' utility under the politician is thus:

$$U^P = 2\bar{\theta} + a_1^P \tag{43}$$

Next, consider the bureaucrat, and suppose that his ability is evaluated according to a composite measure of performance, $y = \delta y_1 + (1 - \delta)y_2$, as in (12) above. Repeating the same steps, and still taking expectations as given, we now obtain:

$$\delta = C_a(a_1^B) \tag{44}$$

$$(1 - 2\delta) \leq C_a(a_2^B) \tag{45}$$

Like the politician, and for the same reasons, the bureaucrat too exerts

less effort in task 2 than in task 1, because under discretion he perceives a cost from unexpectedly high effort. In fact, for $\delta \geq 1/2$, (45) implies $a_2^B = 0$. But now, the constitution gives a tool to overcome this incentive problem: tilting the bureaucratic mission towards task 2, with $\delta < 1/2$, induces the bureaucrat to reduce a_1^B and increase a_2^B. Since costs are convex, at least over some range a_2^B increases by more than a_1^B is reduced. Moreover, if expectations are formed after the constitutional stage, this is reflected into expectations, and $a_2^B = a_2^e$, so that the loss in performance in task 1 is more than offset by the improved performance in task 2. Hence, the voters' expected utility is:

$$U^B = 2\bar{\theta} + a_1^B + a_2^B \tag{46}$$

Unless effort by the politician in task 1 is very high, the voters are likely to be better off under the bureaucrat.

In fact, voters would be even better off if tasks 1 and 2 could be split between two distinct bureaucrats (or between a politician in charge of task 1 and a bureaucrat in charge of task 2). The bureaucrat in charge of task 2 could be given a mission defined only on y_2 as a basis of performance, and someone else could be in charge of task 1. This would get rid entirely of the time inconsistency, since the bureaucrat in charge of task 2 would now disregard completely the negative impact of unexpectedly high a_2 in the performance of the other task. The proposition in the

text follows.

3. Lobbying

As stated in the text, the equilibrium with lobbying must solve the following optimization problem by choice of $a_{1,}a_2$ and f, subject to non-negativity constraints on the three choice variables, and taking voters' expectations a_1^e as given, as before.

$$Max \left\{ \Pr(\theta \geq \bar{\theta} + a_1^e - a_1 - H(f)) + (1+\gamma)a_2 - C(a_1 + a_2) - f \right\} \tag{47}$$

The first order conditions for a_1, a_2 and f evaluated at the point $a_1^e = a_1$ imply respectively:

$$n(\bar{\theta} - H(f)) - C_a(a_1 + a_2) + \mu_1 = 0 \tag{48}$$

$$1 + \gamma - C_a(a_1 + a_2) + \mu_2 = 0 \tag{49}$$

$$n(\bar{\theta} - H(f))H_f(f) - 1 + \mu_3 = 0 \tag{50}$$

where μ_i, $i = 1, 2$ are the lagrange multipliers on the non-negativity constraints for a_i, while μ_3 is the lagrange multiplier on the non-negativity constraint for f.

Consider first the case $H_f(0) < 1/(1+\gamma)$. Since $H_{ff} < 0$, here lobbying is inefficient, and the first order conditions can only be satisfied if $f = a_2 = 0$ and a_1 is at an interior optimum defined by (48) with $\mu_1 = 0$ in it.

Next, consider the case $H_f(f^*) > 1/(1+\gamma)$. This is the opposite extreme, in which lobbying is very effective. In this case $a_1 = 0$ and a_2 and f^* are at an interior optimum defined by (49) and (50) with $\mu_2 = \mu_3 = 0$ in them.

In the intermediate case, in which $H_f(0) > 1/(1+\gamma)$ but the returns to campaign contributions fall rapidly, an equilibrium with lobbying does not always exist. A special knife edge case is given by the case in which $H_f(0) > 1/(1+\gamma)$ and $H_f(f^*) = 1/(1+\gamma) = n(\bar{\theta} - H_f(f^*))$. Here a_1 and a_2 can both be positive, and are defined by

$$1 + \gamma = C_a(a_1 + a_2)$$

and by the condition that the politician is indifferent between this equilibrium and the one with no lobbying.

4. Equilibrium constitutions

Proof of Proposition 8

Consider four cases: delegation vs no-delegation today, given that the voters expect no-delegation after the elections; and delegation vs no-delegation today, given that voters expect delegation after the elections.

Suppose that the voters expect that, after the election, the politician will retain both tasks. Consider each of the two possible constitutional arrangements for the current period. Under bureaucratic delegation (i.e.. the politician is in charge of task 1 while the bureaucrat is in

charge of task 2), the probability of reappointment is: $Pr(y_1 \geq W)$ (since the ability of the incumbent politician in the second task is unknown, it cannot influence the election outcome). If voters are rational and fully understand the institutions in place, then their reservation utility is: $W = \bar{\theta} + a^e$. The equilibrium is then exactly as in section 2 above. In particular, the probability of reappointment is: $Pr(\theta + a_1^P \geq \bar{\theta} + a_1^e) = 1/2$. If instead the politician keeps the second task for himself, and given that the voters understand it, the probability of reappointment is: $Pr(y_1 + y_2 \geq W) = Pr(\theta_1 + \theta_2 \geq W - a_1 - a_2)$, where the reservation utility is now given by: $W = 2\bar{\theta} + a_1^e + a_2^e$. In equilibrium (i.e., with $a_i^P = a_i^e$, $i = 1, 2$), the probability of reappointment is thus: $Pr(\theta_1 + \theta_2 \geq 2\bar{\theta}) = 1/2$.

Now suppose that the voters expect that, after the election, the politician will delegate task 2 and only retain task 1. Here, the relevant reservation threshold imposed by rational voters is: $W = \bar{\theta} + a_1^e$, since voters know that task 2 will not be controlled by the politician after the elections. Hence, the equilibrium probability of reappointment is $Pr(y_1 \geq W) = Pr(\theta_1 \geq \bar{\theta}) = 1/2$, irrespective of whether the politician delegates or not before the elections.[33]

[33] Note that we have implicitly assumed that voters separately observe y_1 and y_2; but this does not matter. If this was not the case, and in the case of no-delegation voters only observed $y_1 + y_2$, then the equilibrium

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