

Bureaucrats or Politicians?*

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Abstract

Policies are typically chosen by politicians and bureaucrats. This paper investigates the normative criteria with which to allocate policy tasks to elected policymakers (politicians) or non elected bureaucrats. Politicians are preferable if ability is less important than effort or there is little uncertainty about whether the policymakers has the required abilities; if there is uncertainty about social preferences and flexibility is valuable; if time inconsistency is not an issue; if vested interests do not have large stakes in the policy outcome; if policy complementarities and compensation of losers is important.

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1 Introduction

Policies are chosen and implemented by both elected representatives (politicians) and non elected bureaucrats. The view that politicians

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choose policies and bureaucrats implement them is too simplistic; 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. For instance, 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, but the rise of the regulatory state has made the bureaucracy a key player in both the decisions and the execution of a large amount of legislation. Fiscal policy is 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.

Is this division of tasks appropriate? More generally, what criteria should guide the allocation of responsibilities amongst politicians and bureaucrats? We explore this question from a normative perspective by asking what is the socially optimal allocation of tasks between these two types of policymakers.

Economists have emphasized one specific argument in favor of delegation of policy to a non elected bureaucrat: time inconsistency in monetary policy. Rogoff (1985) pointed out that an independent and

inflation averse central banker not subject to ex post democratic control would improve social welfare. But there is more to it. For instance, fiscal policy too is marred with a host of time inconsistency problems, but societies seem reluctant to allocate this policy prerogative to independent bureaucrats.¹ An interesting question is why this never happens, and whether it is justified by normative criteria. 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.

We focus the analysis on the individuals at the top (party leaders or high level bureaucrats such as central bank governors). Our premise is that the main difference between top level politicians and top level bureaucrats lies in how they are held accountable. Politicians are held accountable at the elections, for how they have pleased the voters. Top level bureaucrats are accountable to their professional peers or to the public at large, for how they have fulfilled the goals of their organization.

¹ Blinder (1997) argues that some aspects of fiscal policy could be allocated to an independent agency operating like an independent Central Bank. 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.

These different accountability mechanisms induce different incentives. Politicians are motivated by the goal of pleasing the voters and hence winning the elections. Top bureaucrats want to fulfill the goals of their organization, either because of a "career concern" - they want to appear competent to improve their external professional prospects in the public or private sector - or because they draw internal satisfaction from doing well whatever they are expected to do.² Armed with this premise, we analyze a model of task allocation in which a social planner exploits the different incentives of bureaucrats and politicians and assigns tasks to maximize social welfare.

We analyze many different types of policies. From a normative perspective, *politicians* are preferable for tasks that have the following features: i) good performance is due to effort more than to ability, and the required abilities are standard in the sense that there is little uncertainty about the politician's ability to perform his task. ii) flexibility is valuable, because social preferences are unstable and uncertain, or be-

² 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. In addition, by appearing competent, the bureaucrat can guarantee his autonomy and independence (Carpenter 2001).

cause the policy environment can change rapidly; iii) time inconsistency is unlikely to be a relevant issue and intertemporal trade-offs are not important; iv) side payments to compensate the losers are desirable and relevant, or bundling of different aspects of policy management and a comprehensive approach is important; iv) the stakes for organized interest groups are small, or law enforcement is weak so that corruption is widespread.

A recent literature on principal-agent models addresses related issues in career concerns models. 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 how the nature and "fuzziness" of the agencies mission shapes bureaucratic incentives, but they do not contrast bureaucratic and political accountability. 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 unaccountable and cannot be removed after shocks to the voters' policy preferences. Besley and Ghatak (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. In a related context Hart, Shleifer and Vishny ((1997) 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. Sections 5, 6 and 7 deal with redistribution and with the role of organized

interest groups. The last section concludes.

2 The Model

Consider a society that has to decide whether to assign a policy task to an elected officer or to a bureaucrat. With the generic term "policymaker" we indicate who chooses policy, either a politician or a bureaucrat. In the simplest 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:

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

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.³ Citizens care about the policy outcome according to a well behaved, concave utility function, $u = U(y)$. We start with linear preferences, $U(y) = y$, introducing strict concavity later when it matters.

Effort is costly, and the strictly convex and increasing cost is labelled $c = C(a)$. The reward for the policymaker is labelled $R(a)$ and it differs depending on whether the policymaker is a politician or a bureaucrat.

³ Alternatively they could be multiplicative leading to more complicated algebra but similar results. See Dewatripont, Jewitt and Tirole (1999b).

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).⁴

The timing of events is as follows. At the "Constitutional Table" society chooses who has control rights over policy, whether the bureaucrat or the politician. Next, 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 over policy, only the outcome y is observed by the principals, not its composition between effort and ability. Hence the agent's reward can only be based on the policy outcome, y .

In this simple environment, an optimal contract with the policymaker based on performance would achieve the first best level of effort - see appendix 1. But the assumption that policy performance is verifiable and contractible is hard to swallow. Public policy typically pursues many goals, that are often hard to measure and to reward directly through explicit and verifiable contracts. Moreover, if society could write unre-

⁴ The model can be restated in terms of rent extraction instead of effort, by defining $a = -r$ where $r > 0$ are rents and $V(r)$ (with $V_r > 0$ $V_{rr} < 0$) is the utility of rents.

stricted optimal performance contracts with its policymakers, then the question asked in this paper would be utterly uninteresting: bureaucratic delegation under an optimal contract would always dominate political delegation. But this implication does not come even close to any observed institutional arrangement.

We thus assume that policy performance, y , is observable but not contractible. Both bureaucrats and politicians are rewarded based on observed performance, but through an implicit reward scheme that contains specific restrictions compared to an optimal explicit contract. In the next two subsections we spell out our specific assumptions about the implicit rewards offered to a bureaucrat and to a politician, and giving rise to two different reward functions, $R^B(a)$ and $R^P(a)$ respectively. These reward functions are taken as given throughout the analysis. Our normative question is which reward function is more appropriate, given the nature of the policy task.

2.1 The bureaucrat

We posit that the bureaucrat is motivated by "career concerns". That is, he is concerned with the perception of his ability θ in the eyes of those that may offer him alternative job opportunities in the private or public sector, given the stated goals of the bureaucratic organization. This assumption is especially appropriate for high level bureaucrats that

have already been promoted to the top of the bureaucracy, say a central bank governor or the chairman of a regulatory agency.⁵

More precisely, let x be the relevant measure of performance with which the bureaucrat is evaluated (the stated goals of his organization). We assume that the bureaucrat's reward is (the suffix B stands for Bureaucrat):

$$R^B(a) = \alpha \mathbf{E}(E(\theta | x)) \quad (3)$$

where α is the market value of talent, \mathbf{E} denotes unconditional expectations over the random variable x , and E denotes expectations over θ , conditional on the realization of x . Equation (3) contains several implicit assumptions. First, the bureaucrat cares about his talent as perceived by outside observers representing his relevant "labor market". Second, the expectation of talent is formed by conditioning on the bureaucrat's observed performance. Third, the relevant measure of performance, x , must be defined in advance. Fourth, the market value of talent is a given parameter, α , possibly different from 1.

In the context of this simple model, it is natural to assume that the relevant measure of performance for the bureaucrat coincides with social

⁵ At lower levels of the bureaucracy, job security and promotions dictated by seniority only may imply that maximizing perceived competence is not particularly relevant for bureaucrats.

welfare, so that $x \equiv y$ - this assumption will be relaxed in later sections. Denoting the public's perception of a by a^e and using (1), we can then re-write the bureaucrat's reward function (3) as:

$$R^B(a) = \alpha \mathbf{E}(y - a^e) = \alpha \mathbf{E}(\theta + a - a^e) \quad (4)$$

This allows us to easily compute the equilibrium level of effort. First take the first order condition with respect to actual effort, a , taking expected effort a^e as given. Then, impose the equilibrium requirement that $a^e = a$. By (4) and (2), we obtain:

$$\alpha = C_a(a^B) \quad (5)$$

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

How does equilibrium effort by the bureaucrat differ from that induced by an optimal contract? Comparing (5) with (36a) in section 1 of the appendix, we see that the bureaucrat puts in the first best level of effort if $\alpha = 1$, i.e., if the market value of bureaucratic talent coincides with the true value of talent for society.⁶ But if the value of talent for the bureaucrat differs from that for society, and in particular if it is lower, then bureaucratic behavior is no longer socially optimal.

⁶ Here we neglect the bureaucrat's participation constraint, which throughout the paper we assume is always satisfied - see section 1 of the appendix.

2.2 The politician

The politicians's goal is to be reelected and this happens if the voters's utility exceeds a threshold W . Denoting by β the value of office, we can write the reward function for the politician as (the suffix P stands for Politician):

$$R^P(a) = \beta \Pr(u \geq W) = \beta[1 - P(W - a)] \quad (6)$$

where $u = y$ is voters' utility and where $P(W - a) = \Pr(\theta \leq W - a)$. Voters are rational. Thus, they realize that the alternative to reelecting the incumbent is to get another politician with average talent, who will exert the equilibrium level of effort. It follows that:

$$W = \bar{\theta} + a^e \quad (7)$$

Like the bureaucrat, the politician chooses effort before observing his talent, taking the voters' expectations as given. With a normal distribution for θ , equilibrium effort by the politician, a^P , is defined implicitly by the first order condition:

$$\beta n(\bar{\theta}) = C_a(a^P) \quad (8)$$

where $n(\bar{\theta}) = 1/\sigma_\theta\sqrt{2\pi}$ is the density of the normal distribution of θ evaluated at its mean.⁷

⁷ This model could be easily generalized to several periods, if the

How does the effort of the politician compare with that of the bureaucrat? Comparing (5) and (8), the answer is ambiguous and depends on parameters' values. A higher value of office, β , increases the effort of the politician, a higher market value for bureaucratic talent, α , increases the effort of the bureaucrat. Under the assumption that the participation constraint is always satisfied, in this simple example voters prefer whatever arrangement results in higher effort. To simplify notation, and since no additional result hinges on the value of these two parameters, in the remainder of the paper we set $\alpha = \beta = 1$.⁸

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 cycle literature is that of a MA (1) process for ability. Persson and Tabellini (2000) discuss the implications of this political model more extensively.

A more general formulation, outlined in the appendix, would have the politician care about both re-election and, conditional on losing office, his career prospects outside politics. If the value of political office is sufficiently high compared to the expected benefit of a career outside politics, then the main implication of our model would still hold.

⁸ Since we are not considering an optimal contract, both the bureaucrat and the politician could be earning rents in equilibrium (i.e., their

2.3 Discussion

The model seeks to capture a key difference between political and bureaucratic accountability. The politician is held accountable by the voters who choose whether or not to reelect him, based on their utility. The bureaucrat is held accountable by his professional peers or by the public at large, for how he fulfills the goals of his organization. These different accountability mechanisms induce two behavioral differences between a bureaucrat and a politician. First, the form of the objective function differs: the politician strives to achieve a threshold level of utility for the voters; the bureaucrat wants to maximize his perceived talent. Second, the relevant measure of performance is different: for the politician it is the voters' utility; for the bureaucrat it is whatever goals have been assigned to the bureaucratic organization. In this introductory example only the first difference plays a role, since both voters' utility and bureaucratic performance are measured by the same variable, y . Hence the only behavioral difference between the two types of policymaker is that one maximizes an expected value, the other maximizes a probability, both defined over the same random variable. In later sections we study richer policy environments, where the difference over the relevant measure of performance also plays an important role.

participation constraint need not bind).

While the assumption that politicians maximize the probability of victory at the election is now common, there is not a standard model of bureaucratic behavior. Thus, although we are not the first to use it (see in particular Dewatripont, Jewitt and Tirole 1999a,b), our "career concerns" model of a bureaucrat needs some discussion.

Consider first the assumption that the bureaucrat cares about his talent as perceived by outside observers. While we have justified this assumption with reference to monetary rewards in future jobs, it can be interpreted more broadly. Top bureaucrats may care about their perception of talent "per se", as a matter of self-image, pride or legacy. Alan Greenspan will probably retire after he resigns from being chairman of the Fed, but he certainly cares about the perception of his ability in managing monetary policy.

Next, consider the assumption that the relevant measure of performance (from which to infer bureaucratic talent) coincides with the goals of the organization. If there are multiple tasks, as discussed in the next sections, then this assumption plays an important role: it does not allow the bureaucrat or outside observers to select other measures of performance, for instance by focusing on tasks where the market value of talent is higher, or where imperfect monitoring is less of a problem. Thus, we rule out the case in which, say, a Central Banker chooses to ignore

the problem of controlling inflation and, instead, signals his ability in international relations by publishing speeches and books on that topic. This assumption can be defended on several grounds. First, as noted above, a broad interpretation of "career concerns" can incorporate a desire for legacy and good reputation with peer groups, say other Central Bankers. Second, even taking the "career concerns" literally, future career prospects are uncertain and there is a coordination problem: how does the bureaucrat know which is the relevant measure of performance used by outside observers? The assumption that performance is assessed on the basis of the tasks explicitly assigned to the bureaucrat is a natural focal point to select amongst possible multiple equilibria. Third, as stressed for instance by Wilson (1989), bureaucratic organizations have weak internal incentives. To motivate employees, the mission of the organization must be well defined and pursued by the top bureaucrat. A leader who is perceived as pursuing his own personal ambition, rather than fulfilling the organizational goals, is likely to be resisted by his subordinates and this could undermine the leader's own performance. Moreover, a bureaucrat that pursues his own ambitions rather than fulfilling the organizational goals would damage his integrity, and this would certainly hurt his future career prospects. Finally, bureaucrats (top level or lower ranked) are not chosen at random. Presumably

whoever is chosen to perform a specific task has a special ability in that task, or has a particular motivation to perform it well. This makes it in his interest to signal ability through that task and not others. In other words and to continue with the previous example, somebody chosen to be a Central Banker is competent in monetary economics, and it would not be in his interest to signal his ability in international relations ignoring monetary policy.

How do these straw men "politician" and "bureaucrat" relate to real world cases? Probably the most compelling example of our "bureaucrat" is a Central Banker. His incentives to fulfill his task 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: he seeks reelection for himself in his first term and for his party in his second, and is not constrained by pre-assigned or narrowly defined tasks.

Top level 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 "bureaucrat", it is useful as a first step to clearly identify how career concerns and electoral incentives lead to different results depending on the nature of the policy (but see also footnote 7 above).

3 Imperfect monitoring

We now move to the case of imperfect monitoring, that is a situation in which performance also depends on extraneous randomness. Thus, we add noise, ε , besides talent (θ) and effort (a):

$$y = \theta + \varepsilon + a \tag{9}$$

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:

$$R^B(a) = \mathbf{E}(E(\theta | y)) = \bar{\theta} + \phi \mathbf{E}(\theta + \varepsilon + a - a^e - \bar{\theta}) \tag{10}$$

where $\phi = \sigma_\theta^2 / (\sigma_\theta^2 + \sigma_\varepsilon^2) < 1$. 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 ϕ which reflects the signal to noise ratio. In equilibrium the choice of the bureaucrat is given by:

$$\phi = C_a(a^B) \tag{11}$$

Not surprisingly, the bureaucrat puts in less effort the lower is the signal to noise ratio.⁹

Next we 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

⁹ Note that, with imperfect monitoring, the career concern contract no longer induces the optimal amount of effort even when there is no difference between the value of ability for the bureaucrat and for society. Given risk neutrality, the optimal contract (under the assumption that the principal only observes y and ability is evaluated equivalently by society and the bureaucrat) would still induce the same amount of effort as in (5) 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 an additional loss of welfare for the voters.

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 talent, however, does favor the bureaucrat over the politician. With imperfect monitoring a larger variance of θ increases the 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 to overcome the

¹⁰ Here the bureaucrat is risk neutral, which means that his compensa-

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 where the range of possible levels of ability is wide, that is when there is more uncertainty over the policymaker's ability. The reason is not that bureaucrats are more gifted on average, but rather that they have stronger incentives to pretend that they are gifted. Very simple tasks are unlikely to be associated with talent uncertainty: anybody can do them. When tasks become more difficult, the variance in the level of ability is likely to go up, and bureaucrats are more attractive. Attraction 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 would further increase his attractiveness relative to the politician. But the opposite would be true if the bureaucrat'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).

preferable to politicians.¹¹

The implication that bureaucratic rather than political accountability works better for complex tasks is strengthened if evaluating the performance of a bureaucrat also requires special abilities or skills- 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.

Is the real world attribution of task broadly consistent with this im-

¹¹ As pointed out by a referee, bureaucrats also work harder than politicians if performance is more sensitive to ability than to effort. Rewriting (9) as $y = K\theta + a + \varepsilon$, where K is a parameter that captures the relative importance of ability, we obtain that a higher K increases a^B but reduces a^P . To the extent that ability (rather than effort) is needed in complex tasks, this reinforces our conclusion. But many complex policy decisions, such as in foreign policy, require ability of a general rather than a specialized kind.

plication? If difficult tasks are also technically more demanding, then the answer is clearly positive. In many cases technical tasks are delegated to bureaucrats: for instance managing the financial structure of public debt, or regulating public utilities or other industries, while politicians retain the technically less demanding task of setting general targets. In the UK, for instance, politicians choose a target level of inflation; the technically demanding task of choosing interest rates to achieve such target is delegated to the Central Bank. It is not always true, however, that difficult tasks are technically more demanding. Some complex policy decisions, such as in foreign policy, require ability of a general rather than a specialized kind. According to Proposition 1, these complex and yet technically not demanding tasks are also better left in the hands of bureaucrats. But here, we often observe a politician in charge. The next section suggests a different reason, unrelated to variance in ability, why politicians may perform better in such policy environments.

4 Policy tasks in an uncertain world

We now add an element of uncertainty to social welfare. 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, $c = C(a_1, a_2)$. 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:

$$U(\lambda y_1 + (1 - \lambda)y_2) \tag{12}$$

where $\lambda = 1$ 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.

¹² For a general discussion of multi task functions in a principal- agent relationship see Holmstrom and Milgrom (1991).

First, at the Constitutional Table voters choose whether to assign this policy to a bureaucrat or to a politician. Then nature chooses λ , that is social preferences are determined. Having observed λ , the policymaker chooses $[a_i]$, then nature chooses θ , and finally policy is determined and rewards paid. We assume that λ is not verifiable.

Consider bureaucratic delegation first. As discussed in section 2, if the Constitution assigns control rights over policy to the bureaucrat, it also defines a relevant measure of performance with which his ability is evaluated. In that section, social welfare was the natural measure of performance, because it coincided with the only possible measure of performance. But here, at the Constitutional Table social preferences are not yet known, since they depend on the future realization of the random variable λ . Thus, we assume that the bureaucrat can only be assigned an unconditional measure of performance, defined as:

$$x = \delta y_1 + (1 - \delta)y_2 \tag{13}$$

where δ is a parameter specified by the Constitution. This formulation entails two assumptions. First, we assume that the relevant measure of performance assigned to a bureaucrat cannot be ex-post social welfare, u . We can justify this assumption with the argument that social welfare cannot be operationally described ex-ante in an unambiguous way. To do so, we would need specific assumptions about utility functions, technol-

ogy, and many other unforeseeable but relevant features of the economic environment. Of course, individual welfare can be observed ex-post by polling each individual about the policymaker's performance. But telling a bureaucrat that his performance would be assessed ex-post through an opinion poll would transform him into a politician, and the theoretical distinction between political and bureaucratic accountability that is at the core of this paper would be lost. The second crucial assumption is that the operational and describable measure of performance that can be assigned to a bureaucrat, and in particular 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, and again can be justified with reference to the undescribability or unforeseeability of future states of the world.¹³

Under these assumptions, the rewards of the bureaucrat are:

$$R^B(a) = \mathbf{E}(E(\theta | x)) = \mathbf{E}(\theta + \delta a_1 + (1 - \delta)a_2 - \delta a_1^e - (1 - \delta)a_2^e) \quad (14)$$

Given additive costs and $q > 1/2$, it is optimal for society to set $\delta = 1$.¹⁴

¹³ A related structure of contract incompleteness also underlies the models of Constitutional choice by Aghion and Bolton (2003) and Aghion, Alesina, and Trebbi (2004, 2005). See Maskin (2001) for a general discussion and critical evaluation of the assumption of contract incompleteness.

¹⁴ If costs were separable, then the optimal δ would be increasing with q , at a rate that is decreasing with the curvature of $U(\cdot)$ for obvious

The first order conditions for the bureaucrat then imply:

$$a_1^B = C_a^{-1}(1), \quad a_2^B = 0 \quad (15)$$

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

$$U^B = q\mathbf{E}U(\theta + a_1^B) + (1 - q)\mathbf{E}U(\theta) \quad (16)$$

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

Next, suppose that, at the Constitutional Table, society gave control over policy to a politician. To win re-election, the incumbent must show that he is more competent than the opponent, given that voters observe their own utility. This means giving voters a sufficiently high utility. Whatever beliefs the voters entertain about effort allocation, and given that effort is not observed by voters, the politician always finds it in his own interest to put effort in the task preferred ex-post by the voters. Thus, if $\lambda = 1$, then the politician sets $a_2 = 0$; and viceversa he sets reason having to do with risk aversion. The qualitative nature of our result would not change.

$a_1 = 0$ if $\lambda = 0$. Effort in the chosen task is then determined by a first order condition similar to (8) above.

This is what differentiates the politician from the bureaucrat. The politician's goals always depend on the realization of λ (i.e., on the ex-post preferences of the voters). The bureaucrat instead must be told what to do and in some cases he will be assigned the wrong mission. The following proposition follows.

Proposition 2 *The politician, unlike the bureaucrat, 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 a bureaucrat 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 cannot

be stated once and for all¹⁵.

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 (13) 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. Of course, the precision and frequency with which bureaucratic goals are defined can vary from case to case, and determines the extent to which an independent bureaucrat is really in charge of policy decisions (rather than taking orders from the politician).

There is a case in which ex post flexibility is in fact a disadvantage. When society's preferences are time inconsistent, the benefit of flexibility associated with political delegation has a cost. Politicians are much

¹⁵Hart, Shleifer and Vishny (1997) and Wilson (1989) make a similar argument to clarify why it would be close to impossible to privatize foreign policy or to delegate it fully to a non-political agency.

more likely to fall in the trap of time inconsistency, compared to bureaucrats. The reason is that the goals of a politician are unavoidably linked to the ex-post welfare of voters, through reelection motives. The rigidity of bureaucratic control, instead, offers protection against time inconsistency. The bureaucrat 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 and has been used extensively in monetary policy (Rogoff 1985).

A related issue has to do with the time profile of costs and benefits of policy choices. 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 electoral cycles, precisely to avoid short-termist policies. Second, even when bureaucrats have short terms of office, the blame for myopic policies may reach them and hurt them later on. The reason is that bureaucrats care about their professional reputation in the eyes of their peers. This gives bureaucrats a strong incentive to focus on the long term goal. When the short-termism of politicians is an issue, the interaction between bureaucrats and politicians can yield welfare improvements.¹⁶

¹⁶ The working paper version of this paper discusses more formally the benefits of delegation in controlling time inconsistency or short-termism. A large literature, surveyed in Persson and Tabellini (2000), models

5 Compensation of losers

A critical task of 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 a transfer (positive or negative) received by the government. We have two voters (or homogeneous groups of voters of equal size) with strictly concave utility defined over private consumption, $U(c_i)$, $i = 1, 2$ where:

$$c_1 = y_1 + t, \quad c_2 = y_2 - t, \quad y_2 \geq t \geq -y_1 \quad (17)$$

Therefore t is a direct lump sum transfer between voters and the government budget is balanced. Each group benefits from different tasks requiring specific and uncorrelated abilities, θ_i , $i = 1, 2$. Let the distributive myopic electoral cycles in monetary and fiscal policy with rational voters. 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.

tion of θ_i have the same densities $n(\cdot)$ and cumulative distributions $N(\cdot)$ (not necessarily normal). There are random negative spillovers between the two tasks, such that:

$$y_1 = \theta_1 + a_1 - \lambda\kappa a_2, \quad y_2 = \theta_2 + a_2 - (1 - \lambda)\kappa a_1 \quad (18)$$

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 ex-post, but it is not describable ex-ante, so that the bureaucrat's mission cannot be defined contingent on λ . 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:

$$R(a_1, a_2) - C(a_1) - C(a_2) \quad (19)$$

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:

$$R^P(a_1, a_2) = \Pr ob(U(c_1) \geq W_1) * \Pr ob(U(c_2) \geq W_2) \quad (20)$$

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:

$$\frac{n(z_1)}{1 - N(z_1)} = \frac{n(z_2)}{1 - N(z_2)} \quad (21)$$

where $z_1 = U^{-1}(W) - t - a_1 + \kappa a_2$ and $z_2 = U^{-1}(W) + t - a_2$. 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 z , and given the assumption of the same distribution for θ_i , $i = 1, 2$, equation (21) implies $c_1 = c_2$.¹⁷ That is, the politician implements full insurance, fully compensating the losers from the negative externality.

Exploiting (21), the optimality conditions for the allocation of effort

¹⁷ A uniform distribution of θ satisfies the assumption of a monotonically increasing hazard rate, for instance.

to the two tasks imply:

$$n(z_1)(1 - N(z_2)) = C_a(a_1^P) \quad (22)$$

$$n(z_2)(1 - N(z_1))(1 - \kappa) = C_a(a_2^P)$$

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 (22) with (8) in section 2, however, we see that the politician is induced to put less effort in both tasks, including the one without a 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 lose the election because he happens to be unable in task 2. His awareness of this risk (captured by the term $(1 - N(z)) < 1$ on the left hand side of (22)), dilutes his incentives.¹⁸

Let's now turn to the bureaucrat. As in section 4, we assume that the measure of performance that he is assigned at the Constitutional Table (and on the basis of which his career-incentives are determined) cannot be contingent on λ and cannot be formulated in terms of social welfare ($U(c_1) + U(c_2)$) because it is too vague a concept, or cannot

¹⁸ Persson and Tabellini (2000) and Seabright (1996) make a similar point in comparing centralized vs decentralized arrangements.

be observed by outsiders to infer the bureaucrats' talent. With this restriction, the natural measure of performance in this context is total output, $x = (y_1 + y_2)$. If given this goal, the bureaucrat allocates effort efficiently, taking the negative externality into account:

$$1 = C_a(a_1^B) \tag{23}$$

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

Comparing (23) with (22), we see that the bureaucrat puts in more effort than the politician, since his incentives are not diluted by the risk of losing the election (the terms $(1 - N(z))$ are missing from (23)). Nevertheless, compensating transfers are set to zero.

Comparing the politician and the bureaucrat, we thus have:

Proposition 3 *The politician provides side payment to compensate losers but has weaker incentives than the bureaucrat; the latter, however, does not compensate losers.*

This result follows from the assumption that bureaucrats cannot be given state contingent missions. 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 eas-

ier 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 does not have the ability, interest or authority to provide compensation to the local owners.

6 Lobbying and bribing

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 that can influence policy decisions. Both the politician and the bureaucrat can be captured by the interest group, but with different mechanisms. This difference can give rise to a constitutional preference for one or the other type of policymaker, depending on the circumstances.

As in section 4, there are two tasks, $y_i = \theta + a_i$, $i = 1, 2$ and 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 is small and its vote is irrelevant; but he can influence policy through bribes, b , or campaign contributions, f . Thus, the preferences of voters are just y_1 , while those of the interest group can be written as:

$$(1 + \gamma)y_2 - b - f \tag{24}$$

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:

$$W = \bar{\theta} + a_1^e - H(f) \tag{25}$$

where the function $H(\cdot)$ captures the effect of campaign contributions.

It is natural to assume that $H(0) = 0$, $H_f > 0$, $H_{ff} < 0$. At the Constitutional Table the lobby has no influence, so if the bureaucrat is given control rights over policy, his assigned measure of performance coincides with the task that benefits voters at large ($x = y_1$). Under these assumptions, we can write the policymaker's preferences as:

$$R(y_1, y_2) - C(a_1 + a_2) + b - qZ \quad (26)$$

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). 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:

$$a_1^B = 0, \quad a_2^B = C_a^{-1}(1 + \gamma) \quad (27)$$

Moreover, restricting attention to truthful contribution (here bribing) schedules, the equilibrium bribing schedule has the following simple form:¹⁹

$$B(a_2) = \bar{B} + (1 + \gamma)a_2 \quad (28)$$

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:

$$\bar{B} = C(a_2^B) - C(\hat{a}_1^B) + \hat{a}_1^B - (1 + \gamma)a_2^B + qZ \quad (29)$$

where $\hat{a}_1^B = C_a^{-1}(1)$ denotes the equilibrium policy if no bribe is accepted.

¹⁹ See Grossman and Helpman (2001).

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 (29), an equilibrium with positive bribes exists only if the following condition is satisfied:

$$(1 + \gamma)a_2^B - [C(a_2^B) - C(a_1^B) + a_1^B] \geq qZ \quad (30)$$

If instead this condition is violated, then bribing does not take place and the equilibrium with the bureaucrat delivers the optimal policy for the voters. Equation (30) makes 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 is small).

6.2 Lobbying the politicians

Next, suppose that the politician is in charge of policy. A condition similar to (30) 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 the probability of being caught is high. But now, besides bribes, the organized interest group can also resort to campaign contributions. He chooses to do so if campaign contributions are sufficiently effective in swaying the voters.

Specifically, in an equilibrium with campaign contributions, the al-

location of effort must be jointly optimal for the politician and the organized group, given voters' expectations. In particular, the outcome must be optimal for the lobby, subject to the constraint of leaving the politician indifferent between accepting the campaign contribution and pleasing the lobby, or refusing the campaign contribution and allocating effort as optimal for the politician, given voters' expectations. Let \bar{W} denote the politician's utility if it refuses the campaign contributions, given voters' expectations. Then 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:

$$Max \{ (1 + \gamma)a_2 - f \} \text{ s.to : } Pr(\theta \geq \bar{\theta} + a_1^e - a_1 - H(f)) - C(a_1 + a_2) \geq \bar{W} \quad (31)$$

The appendix describes the full equilibrium. Its properties depend on how effective are campaign contributions in swaying the voters - i.e. on the slope of the function $H(f)$. If $H_f(0)(1 + \gamma) < 1$, 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 $H_f(f^*)(1 + \gamma) > 1$, where f^* denotes equilibrium campaign contributions. In this case, campaign contributions are very effective at the margin. Effort is allocated entirely to please the organized group only ($a_1 = 0$), and it is determined jointly with equilibrium campaign contributions, by the requirement that the politician is indifferent between accepting or not the contributions and by the following optimality condition:

$$n(\bar{\theta} - H(f^*)) \cdot H_f(f^*)(1 + \gamma) = C_a(a_2^P) \quad (32)$$

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

For intermediate properties of the slope $H_f(\cdot)$, the equilibrium could entail positive effort by the politician on both tasks. Note that in this case too, voters are hurt by lobbying: given our formulation of the cost function, effort devoted to please the lobby (a_2) reduces effort devoted to please voters (a_1).

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 bureaucrat, the organized group needs to engage in illegal activities and fight against possibly deeply entrenched professional goals and standards of a technical bureaucracy. To influence a politician, instead, the interest group has an additional instrument: he 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. Thus, 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, are more safely left in the hands of the bureaucrat. The regulation of public utilities is a typical example: the interests of consumers are easy to identify and protect through regulation, while the stakes for the utilities' supplier are very high and a politician may be easily captured.²⁰

Note that this result points to an important difference between ad-

²⁰ This normative argument in favor of bureaucrats is mitigated if they 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 poli-

vanced 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.²¹

7 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:

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

We start with risk neutral voters, that have utility function $U(c_J) = c_J$, and comment below on how the results would change if they are risk averse.

The key difference between a politician and a bureaucrat is, once again, that the former needs a majority to win and the latter simply cymakers are offered lucrative jobs in the private sector.

²¹ Glaser and Shleifer (2003) reach a similar conclusion, using a different analytical framework.

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, $x \equiv y$, not by how he redistributes. His first order conditions are thus identical to those in (5), 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:

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

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 $W = (\bar{\theta} + a^e)/3$. 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:

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

where $n(z)$ denotes the normal density evaluated at point z . Comparing (35) with (8) in section 2, we see that once the politician is also in charge of redistribution, he can get away with less equilibrium effort. 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.²²

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.²³ Here we assumed a very stark asymmetry: no uncertainty at all about how the incumbent will redis-

²² 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).

²³ Indeed, if the voters were certain to be included in the winning

tribute, and maximal uncertainty about the opponent. But the nature of the results would be preserved with less stark assumptions, as long as voters are more uncertain about the redistributive policies of the opponent compared to those of the incumbent.

The assumption that the opponent's future redistributive policies are more uncertain than those of the incumbent can be derived from more primitive assumptions. For instance, suppose that politicians have lexicographic preferences: first they care about re-election, as spelled out above. Second, conditional on being re-elected, they also care about the welfare of specific groups of voters. Suppose further that voters ignore these redistributive preferences. Then, the incumbent's redistributive policies reveal his preferences, and voters correctly expect these policies to be continued if he is re-elected. As they cannot observe what the opponent would do, voters face more uncertainty if voting for the opponent. This simple example also points to the fact that it is in the interest of politicians to pretend that they are ideologically biased in favor of specific groups or policies, even if in reality they are purely opportunistic. The ideology of politicians is like their brand name: it keeps voters attached

coalition by the opponent, their reservation utility would be $W = (\bar{\theta} + a^e)/2$. In this case the effort of the incumbent would coincide with (8) and there would be no dilution of effort due to redistribution.

to parties and reduces uncertainty about how politicians would act once in office.²⁴

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 normative 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.²⁵ 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

²⁴Drazen and Eslava (2004) analyse a model of electoral policy cycles where voters infer the redistributive preferences of the incumbent from the policies he enacts.

²⁵ Maskin and Tirole (2001) also point out that 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).

an "unfair" bureaucrat seems more plausible, since in a complex world it is difficult to precisely assign redistributive task to a bureaucrat.

We can summarize this discussion in the following:

Proposition 5 *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.*

8 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 re-election 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 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 a normative 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 redistributive 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 that vary widely in the population 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 normative 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 so that compensation of losers is important, 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 required to build consensus or achieve efficiency). Regulation of public utilities or of specific industries are examples of policies that lend

themselves 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 category 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 examples on compensation of losers and cake splitting. But there are specific aspects of fiscal policy that would certainly meet our normative 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 normative analysis 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. Are these normative conclusions likely to be reflected in observed institutional arrangements? We explore this positive question in a companion paper, Alesina and Tabellini (2004). There we show that opportunistic politicians do not internalize these normative 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" requires that bureaucratic delegation be complete, so that the blame for policy failure lies fully with the independent agency and does not reach 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 normative and positive reasons. But partial delegation of narrowly defined technical tasks in fiscal policy may be 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. The optimal contract

Consider the simple model of section 2. If effort a is verifiable and contractible, then the optimal contract induces the first best level of effort, a^* , defined implicitly by:

$$1 = C_a(a^*) \tag{36a}$$

Next, suppose that effort is unobservable, but performance y is verifiable and contractible. Given risk neutrality of principal and agent, the first best can still be achieved by an optimal explicit contract rewarding the agent with a simple linear payoff based on performance:

$$R(y) = y - w$$

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

$$\mathbf{E}(R(y)) - C(a) \geq 0 \tag{37}$$

Under the optimal performance contract, the participation constraint must bind, and given (1) and (37), this implies: $w = \bar{\theta} + a^* - C(a^*)$.

2. More general objective function for the politician.

As mentioned in section 2, the politician's objective function could be written more generally by assuming that he cares about both re-election and, conditional on losing office, his career prospects outside politics. In this case, his reward function could be written as:

$$R^P(a) + P(W - a)R^B(a) = \beta[1 - P(W - a)] + P(W - a)\alpha\mathbf{E}(y - a^e)$$

where as before $P(\cdot)$ is the probability of losing the election. The first order conditions for effort evaluated at the equilibrium are:

$$n(\bar{\theta})(\beta - \alpha\bar{\theta}) + \frac{1}{2}\alpha = C_a(a^P)$$

If the value of political office is sufficiently high compared to the expected benefit of a career outside politics (if β is sufficiently higher than $\alpha\bar{\theta}$), then the main implication of our model would still hold.

3. Lobbying

As stated in the text, the equilibrium with campaign contributions 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.

$$\text{Max} [(1 + \gamma)a_2 - f] \text{ s. to } \Pr(\theta \geq \bar{\theta} + a_1^e - a_1 - H(f)) - C(a_1 + a_2) \geq \bar{W} \quad (38)$$

where $\bar{W} = \Pr(\theta \geq \bar{\theta} + a_1^e - \hat{a}_1) - C(\hat{a}_1)$ is the politician's utility if he refuses the campaign contributions and unexpectedly devotes effort to please the voters (given that voters' expectations a_1^e are consistent with the equilibrium outcome). The out-of-equilibrium level of effort \hat{a}_1 is defined implicitly by the optimality condition: $C_a(\hat{a}_1) = n(\bar{\theta} + a_1^e - \hat{a}_1)$, and also depends on voters expectations of the equilibrium outcome. In equilibrium, voters expectations must be consistent with the task

allocation chosen by the politician.

Letting λ denote the Lagrange multiplier of the constraint that the politician is indifferent between accepting or refusing the campaign contributions, the optimality condition of the lobby's optimization problem imply:

$$n(\bar{\theta} - H(f)) - C_a(a_1 + a_2) \leq 0 \quad (39)$$

$$1 + \gamma - \lambda C_a(a_1 + a_2) \leq 0 \quad (40)$$

$$\lambda n(\bar{\theta} - H(f)) H_f(f) - 1 \leq 0 \quad (41)$$

where a strict inequality implies respectively: $a_1 = 0$, $a_2 = 0$, $f = 0$.

Consider first the case $H_f(0) < 1/(1 + \gamma)$. Since $H_{ff} < 0$, 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 $n(\bar{\theta}) - C_a(a_1) = 0$.

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 jointly by

$$C_a(a_2^P) = (1 + \gamma) H_f(f^*) n(\bar{\theta} - H(f^*))$$

and by the politician's indifference condition (with \bar{W} evaluated at the point $a_1^e = 0$), namely:

$$\Pr(\theta \geq \bar{\theta} - H(f^*)) - C(a_2^P) = \bar{W} \quad (42)$$

In the intermediate case, in which $H_f(0) > 1/(1 + \gamma)$ but the returns to campaign contributions fall rapidly, we could also have an equilibrium with positive campaign contributions but where the politicians devotes effort to both tasks. In this case the equilibrium outcome is defined implicitly by the politicians's indifference condition (42), and by the optimality conditions evaluated at an interior optimum for all three choice variables, which implies:

$$(1 + \gamma)H_f(f^*) = 1$$

$$n(\bar{\theta} - H(f)) = C_a(a_1^P + a_2^P)$$

In the last two cases, the lobby must also be better off than in the absence of campaign contributions, i.e. $(1 + \gamma)a_2^P \geq f^*$. Voters are always made worse off by positive campaign contributions, since they reduce effort in the preferred task a_1 .

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