Discussion Papers

Adhibe rationem difficultatibus

Marco Catola

Contribution and bribe: lobbying in presence of incumbent and bureaucrat

Indirizzo dell'Autore:
Marco Catola
Dipartimento di Economia e Management, via Ridolfi 10, 56100 – Italy
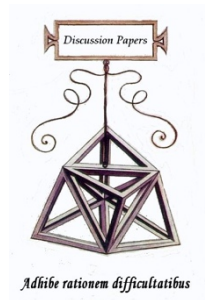*Email: catolamarcogmail.com*

Adhibe rationem difficultatibus

Marco Catola

Contribution and bribe: lobbying in presence of incumbent and bureaucrat

Abstract

This paper discusses the effects on the quality of the decision of the introduction of a watchdog bureaucrat who provides policy recommendations that are costly to be ignored. Through a simple model, it is shown that, if both the politician and the bureaucrat are sensitive to the pressure of an interest group, the positive impact of bureaucrats is very small, even though not null. Moreover, by characterising the conditions that allow this effect, it is shown that if the bureaucrat's recommendation is too binding, the decision power moves from the politician to the bureaucrat, producing a reduction in accountability without any improvement in the quality of the decision.

1 Introduction

In the last decades, the interest in the increasing role of money in politics, and in particular its use by special interest groups as a mean to "buy" political favours has hugely increased with more and more request of reforms meant to reduce the importance of lobbies over the legislators. The economic literature gave its contribution with several theoretical works (see for example Bernheim & Whinston, 1986; Grossman & Helpman, 1994) highlighting how money could play an important role in influencing policy decisions.[1]

One of the main consequences of this increased attention to the issue has been the idea that, since politicians looking for reelection are too inclined to accommodate the interests of lobbies in exchange for their support, an increasing role of bureaucrats, with no electoral concerns, into the decision making process would improve the goodness of the decision taken.

The first and most natural role that bureaucrats can play in the decision making process is the one of information providers since they often have technical skills on a specific subject that are superior to those of politicians who have to make a decision. In other words, they can act as advisers for incumbent politicians. Studies of information transmission from more informed experts to less informed decision makers have a long history in the economic literature dating back to the seminal paper of Crawford and Sobel (1982) and following developments of the so-called Cheap Talk literature (see for example Kartik, 2009; Pei, 2015). Even though in this literature the framework is usually very general, the main theoretical results can be easily applied to the specific focus of the role of bureaucrats.[2]

Many are the real cases where this second framework can be applied: one of the most notable examples is the Congressional Budget Office. This independent bureaucratic institution, formed by non partisan economists, was set up in 1974 and its role is to provide Congressmen with an independent costing of the policies proposed by the U.S. Government, in addition to the one provided by the Government itself.

This design proved to work quite well, since it has actually improved the ability of Congressmen to make more informed choices over policies proposed, increasing their bargaining power versus the Government. Interestingly enough, this Office cannot formulate any suggestion on the policies themselves but only evaluate those proposed by the Government in a clear effort to remark the unique advisory role of this institution.[3]

A possible more active role for bureaucrats is that of actual decision makers, corresponding to the cases of delegation of the decision making power from elected officials to appointed bureaucrats. The interest of researchers has followed the in-

---

[1] For a comprehensive discussion on the techniques and formal models as well as a review of the early literature see Grossman and Helpman (2001).

[2] It is worth to mention that the same framework has been applied to the literature of informational lobby, which studies the cases in which lobbies try to obtain their preferred policy by offering to the incumbent relevant information rather than money. Even though in this set up the interest group cannot directly provide information, this important stream of literature (see among others Austen-Smith & Wright, 1992; Bennedsen & Feldmann, 2006a; Dahm & Porteiro, 2008a; Cotton & Déllis, 2016) is somehow related given that the interest group can offer information *indirectly*.

[3] A similar institution exists in other countries, for example, the "Central Planning Bureau" in the Netherlands and the "High Council of Finance" in Belgium. The Italian Parliament has also recently established a similar office, under the name of *Ufficio parlamentare di bilancio*.

creasing diffusion of Agencies, across both USA and Europe, following the example of the Swedish system where agencies are the main model of organisation of public administration.

The spread of these agencies, often endowed with large decision power, has stimulated a first wave of studies, analysing the optimal delegation level from Congress to Agencies in the form of an agency model, highlighting the trade off between the increase of expertise in the decision, and the decrease of control connected to a higher level of delegation (see Epstein & O'halloran, 1994, 1999; Gailmard, 2002). A second generation of contributions has enriched the study of this standard trade off taking into account the presence of interest groups and their interaction with both politicians and bureaucrats. For example Boehmke, Gailmard, and Patty (2005) study a model of informational lobby where the interest group can decide to lobby either the Congress or the Agency. More related to this work, Bennedsen and Feldmann (2006b) study how this decision about delegation changes when bureaucrats can be targeted by interest groups through payments, and the different incentives for delegation connected to different institutional organisation of the government.

However there is also a third possibility which has not yet been analysed by the literature but which has become extremely common especially at local level: it is the role of bureaucrats as watchdog of choices taken by incumbents.[4]

In other words, the role of bureaucrats is not simply to help politicians take the right decision, but also to make sure that they do.

These mechanisms are usually imposed by the central government, exploiting the fact that, in general, the accountability of local politicians is not only political but also administrative, since they might be obliged to refund the State for the negative consequences of their wrong choices. In such a context, the approval of a given decision by the bureaucrats greatly reduces or even eliminates, the liability of the politicians who took that decision.[5]

In the context of the Italian municipalities, for example, many expenditure decisions are subject to prior scrutiny by external auditors. Their negative judgement in no way prevents such decisions from being taken. However, in this case, politicians are personally liable for any financial damage caused by such decisions.

Nevertheless, if one admits that even if they do not have reelection motives, also bureaucrats can be captured by the action of special interest groups, it is not *ex ante* guaranteed that the decision making process can benefit from the presence of a watchdog.

The aim of this paper is to study whether the introduction of a watchdog can actually improve the quality of the policies chosen when both politician and watchdog are sensitive to pressure exerted by an interest group.

To do so, starting from the standard framework of informational lobbying models (see for example Dahm & Porteiro, 2008b), this paper presents a model of policy decision under uncertainty in a context in which a special interest group offers a

---

[4]For example a major reform of Italian municipalities in the 90s has introduced a large shift of powers from mayors to bureaucrats in relevant areas like decisions concerning public works, town planning and budgeting.

[5]In more rare cases bureaucrats are endowed with *veto power* over the decisions of politicians. However, the use of this power from the bureaucrat is usually limited to the need to make sure that the incumbent does not violate the law, or to a very restricted set of decisions which require a very high degree of technical knowledge in order to be taken.

political contribution in exchange for a favourable decision.

An incumbent politician, who values both making good choices and receiving a contribution, has to take a single policy decision between two alternatives without knowing which is the correct one. The bureaucrat knows the correct policy choice and exercises the power of a watchdog by recommending a policy. The incumbent can decide to comply with the recommendation or not. In the latter case, the incumbent has to pay a cost for not complying, the size of which is proportional to the power of the bureaucrat.

However, the bureaucrat is not obliged to be sincere, consequently, the interest group can also offer a bribe to the bureaucrat in order to have recommended its favourite policy.

In order to evaluate whether or not the bureaucrat can have a positive impact in the process, the paper begins with the analysis of a benchmark case, in which only the interest group and the incumbent are present. In order to make a strong case, the benchmark is designed as a worst case scenario in which the interest group is always able to convince the incumbent to choose its favourite policy independently from the probability distribution of the states of the world or the actual realisation of it.

After that, the full game is solved by backward induction, characterising for a for a generic value of the cost, the optimal strategy of the interest group with respect to the probability distribution of the states and their actual realisation.

Then, assuming the perspective of a Social Planner, the paper investigates whether it is possible to set up the power of the bureaucrat, i.e. the cost for not complying with the policy recommended, in such a way that at least for some possible probability distributions of the states of the world, the incumbent eventually chooses the correct policy rather than the favourite project of the interest group.

The main result is the derivation of a sufficient condition for the value of the cost ensuring that such result is possible; therefore, in principle, a Social Planner could improve the situation of the benchmark case by appointing a bureaucrat with watchdog power.
However, this window of opportunity is rather small, therefore the improvement is limited to cases in which the *ex ante* probability that the favourite project of the interest group is the correct choice is very small and the Social Planner knows the probability distribution of the game.
Moreover, the improvement in the quality of the decision making process comes at the cost of an increase in wasteful transfers of money from the interest group to the officials, added to a partial shift of power from an elected incumbent to an unelected bureaucrat.

The paper is organised as follows. Section 2 presents the model. Section 3 analyses the benchmark model, while section 4 characterises the solution of the game. Finally section 5 presents the main results of the paper, while section 6 concludes.

2   The model

There are two possible states of the world $\{1, 0\}$, where 1 occurs with probability $\rho \in (0, 1)$, while 0 with probability $1 - \rho$. The probability distribution is assumed to be common knowledge among all players.

There are two possible policies A or B, where A is the optimal policy if the state of the world is 1, while B is the optimal one if the state of the world is 0.

The players of the game are the interest group, the incumbent and the bureaucrat.

2.1 Interest group

The interest group has a state independent preference; it always prefers policy B, which hereafter will be referred to as "pet project".

In order to ensure that its pet project is selected, the interest group has two instruments: the first one is a political contribution (c) to the incumbent and the second one is a bribe (b) to the bureaucrat.

In both cases, this is done through the offer of contribution schedules in line with the literature on lobbying as an agency problem (see Bernheim & Whinston, 1986; Grossman & Helpman, 1994). The main idea is that the principal (the interest group) proposes a schedule that assigns to each possible choice of agents, the amount of contribution that it is willing to pay if that choice is realised. Then the agent (the politician), given this schedule, selects the utility maximising policy, evaluating the political contribution as a mean for the future political campaign, which however is left outside of the model.

Even though the possibility that the interest group engages the incumbent with an informational lobby is discarded from the paper, the interest group is assumed to have knowledge about the realised state of the world. This assumption is convenient since it rules out the possibility of strategic actions of the bureaucrat.

The interest group maximises its profit net of the contributions given to the bureaucrat and to the incumbent.

$$\pi = \Pi - (b + c) \tag{1}$$

where Π, the gross profit deriving from the policy choice, is assumed to be equal to 0 if project A is chosen and to 1 if project B is chosen:[6]

$$\Pi = \begin{cases} 1 & \text{if} \quad i = B \\ 0 & \text{if} \quad i = A \end{cases}. \tag{2}$$

2.2 Incumbent

The incumbent has to choose a policy i among the options A and B.

In line with the literature on lobbying, it is assumed that the incumbent is interested on the one hand in matching policies and states of the world, and on the other hand in receiving political contributions from the interest group.

Moreover, the incumbent does not have access to the realisation of ω. Therefore the choice of the state will rely on two elements. The first one is the knowledge of the probability distribution of the states (i.e. ρ). The second element is the message m that the incumbent receives from the bureaucrat about the right policy. The particular feature of this message, which also represents the novelty of this

---

[6]For example, if the policy to be chosen is the construction of a public infrastructure, then if project B is chosen, the interest group is rewarded with the contract to realise it, while if project A is chosen, the contract will be assigned to someone else.

contribution, is that it does not impact on the politician's beliefs (like in the standard literature on informational game, Crawford & Sobel, 1982), and it is not binding (as it would be in case of delegation) but imposes a cost on the incumbent that decides to ignore it.

The utility function G of the incumbent is additive and separable in all elements and takes the following form:

$$G(i) = \begin{cases} c(i) + rp(i) - x & \text{if} \quad i \neq m \\ c(i) + rp(i) & \text{if} \quad i = m \end{cases}, \tag{3}$$

where $p(i)$ is the probability that policy i is optimal given the realisation of ω, r is the fixed payoff premium that the incumbent obtains for the correct matching and x is the cost that the incumbent pays for ignoring the policy recommendation of the bureaucrat.

There are many possible interpretations for r. For example, it may represent a *political premium* connected to voters' appreciation for correct matching; therefore a good matching will, eventually, increase to some extent the probability of being reelected. Different interpretations can be found for example in Ferejohn (1986) where r measures the explicit compensation of holding the office, or in Maskin and Tirole (2004) where r is a measure of the *legacy motive*: the incumbent wants to be remembered for the good choices made.

In the proceeding of the paper it is assumed that the incumbent has a rather strong office holding motive, therefore that $r \in [\frac{1}{2}, 1]$.

As for x, whose range of values is assumed to be $[0, 1]$, it captures the fact that, at the local level, politicians are not only politically accountable to the voters but also administratively accountable to the central state. This means that local politicians are responsible both for decisions taken in the wrong way and for decisions that have proved to be wrong by economically damaging the institution they administer.

The simplest way to introduce this accountability into the model is through a cost that comes with the need to prove the goodness of the choice with respect to what has been reported by the bureaucrat. This is consistent with the already stated interpretation given that an administrative violation typically implies a fee.

It then follows that x can also be interpreted as a measure of the power of the bureaucrat. The higher the cost that the politician has to pay to defend the decision to defy the bureaucrat's recommendation, the higher is the power of the bureaucrat.

It is worth noticing that even if the cost incurred by the incumbent is connected to the case in which the policy recommended happens to be right, x is independent of the actual realisation of ω, implying that the incumbent sustains the cost even if the decision to ignore the message of the bureaucrat is *ex post* right. This is not unreasonable because, in reality, even if the decision of the politician to ignore the recommendation of the bureaucrat turns out to be correct, demonstrating the rightness of this choice generally requires a long and expensive process.

2.3 Bureaucrat

The bureaucrat is a subject with technical skills concerning the policy issue, whose role is to observe the realised state of the world, and on that basis, to recommend a policy to the incumbent, through a message m.

This message does not need to be truthful, even though, differently from the standard models, this is not due to differences in preference between the bureaucrat and the incumbent, but because of the influence of the interest group, who may be willing to bribe the bureaucrat in exchange for a more favourable recommendation.

However, this misreporting is costly. The bureaucrat suffers a cost, either in terms of loss in reputation, negative economic consequences or as a cost of "manipulating" the report, if the recommended policy is the wrong one.

Moreover, the fact that the probability distribution of the states of the world is common knowledge implies that the incumbent has a belief about what the correct policy might be. As a consequence the more a state of the world is likely *ex ante* the more costly will be for the bureaucrat to misreport the reality.

The bureaucrat has a utility function V which is additive and separable in the amount of the bribe and the lying cost.

Following the literature (see for example Kartik, 2009), the lying cost is assumed to be quadratic. In particular, it is equal to the quadratic difference between the expected value of ω and the reported message m.

Given the definition of ω, it follows that

$$E[\omega] = \rho,$$

therefore

$$V = \begin{cases} b(m) - (\rho - m)^2 & \text{if} \quad m \neq \omega \\ b(m) & \text{if} \quad m = \omega \end{cases}. \tag{4}$$

It is worth noticing that both the incumbent and the bureaucrat give the same weight to all the addends in their utility function. In the lobbying literature, however, it is sometimes assumed a positive weight α for the contribution. The reasons for this choice and the consequences of a different one are discussed in Appendix B.

Finally, given that the profits that the interest group obtains if policy A is implemented are equal to 0, it follows that the interest group will offer a bribe to the bureaucrat and a contribution to the incumbent only in exchange of the recommendation or the choice, respectively, of its pet project. Hence $b(1) = c(A) = 0$. Therefore, in order to simplify the notation, from now on define $b(0) = b$ and $c(B) = c$.

2.4   Time of the game

The timeline of the game is as follows.

In the first stage, the interest group chooses the bribe schedule for the bureaucrat, b in exchange for a favourable policy recommendation. In the second stage, given the bribe that the interest group offered, the probability distribution of states, and the realised one, the bureaucrat chooses which policy to recommend. In the third stage, the interest group decides its contribution schedule to offer to the incumbent. Finally the incumbent, given the contribution schedule and the policy recommended, selects the policy.

The timeline is depicted in Figure 1.

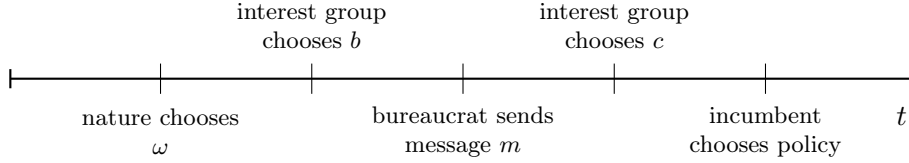The game is solved by backward induction.

Figure 1: Timeline

3 Benchmark Case

The first step of this analysis is to consider a model where there are only an incumbent and the interest group.

With respect to the full model, in this case, the cost for not complying x is absent. The utility function of the incumbent then takes the following form

$$G(i) = \begin{cases} r\rho & \text{if} \quad i = A \\ c + r(1 - \rho) & \text{if} \quad i = B \end{cases}, \tag{5}$$

while the profit function of the interest group is equal to

$$\pi = \begin{cases} 0 & \text{if} \quad i = A \\ 1 - c & \text{if} \quad i = B \end{cases}. \tag{6}$$

Interest group's objective function is simply the gross profit, net of the political contribution only.

$$\pi = \Pi(i) - c. \tag{7}$$

The following lemma characterises the solution of this game, both in the case in which there is no lobbying and in the case in which lobbying is allowed.[7]

Lemma 1. *In the benchmark case,*

(i) *if there is no lobbying activity, the incumbent chooses project A if $\rho > \frac{1}{2}$ and project B if $\rho \leq \frac{1}{2}$;*

(ii) *if there is lobbying activity, the incumbent always chooses policy B, and the interest group pays a contribution equal to*

$$c = (2\rho - 1)r, \tag{8}$$

which is positive only if $\rho > \frac{1}{2}$.

The intuition behind this result is simple. If 0 is the state of the world more likely to happen, the incumbent would choose project B even without the presence of the interest group, therefore no contribution is needed. However, if the most likely state of the world is 1, without any contribution the incumbent would choose project A, which ensures a higher expected payoff. In this case, the interest group can interfere

---

[7]All proofs are provided in Appendix A

7

in the decision, and given that the incumbent cares enough about the campaign money, its action is always successful.

The profit of the interest group takes the following form:

$$\pi = \begin{cases} 1 & \text{if} \quad \rho \in (0, \frac{1}{2}] \\ 1 - (2\rho - 1)r & \text{if} \quad \rho \in (\frac{1}{2}, 1) \end{cases}. \tag{9}$$

Notice however that the presence of the interest group is not necessarily *ex ante* negative for the quality of the decision. As a matter of fact, if one measures the quality of the political process by the *ex ante* probability that the incumbent makes the wrong choice

$$\Psi = \Pr(\omega = 1)\Pr(i = B) + \Pr(\omega = 0)\Pr(i = A) \tag{10}$$

it follows that, in the case without lobbying

$$\Psi = 2\rho(1 - \rho) \tag{11}$$

while in case of lobbying it is equal to

$$\Psi = \rho. \tag{12}$$

From this it follows that if $\rho < \frac{1}{2}$ the presence of lobbying is actual welfare improving.

For this reason in the proceeding of the paper the state of the world 1 is assumed to be more likely, i.e. $\rho > \frac{1}{2}$.

4   Full game

In the benchmark model, if the interest group is allowed to lobby the incumbent, the project A is never chosen. From the point of view of a central government interested in a good matching between policies and states of the world, this outcome could be considered undesirable.

There are of course many possible reforms that could be implemented trying to improve this situation. The one considered in this paper is the appointment of a bureaucrat with watchdog powers.

This section presents the full game, where all the three players are present.

Given that the contribution schedule offered by the interest group to the incumbent depends on the message transmitted by the bureaucrat, henceforth let c_m be the contribution schedule that the interest group offers, given the policy recommended by the interest group.

4.1   Stage IV

In the last stage of the game, given the recommendation m received from the bureaucrat and the contribution schedule c of the interest group, the incumbent has to choose the policy i.

Since the objective function of the incumbent is message dependent, two cases have to be taken into account. The campaign contribution will, therefore, be message dependent.

Lemma 2. *Let* $\underline{\rho} \equiv \frac{r+x}{2r}$, *then*

(i) if the bureaucrat recommends policy A ($m = 1$), for any value of ρ, the incumbent chooses the policy B if the contribution is equal to:

$$c_1 = (2\rho - 1)r + x; \tag{13}$$

(ii) if the bureaucrat recommends policy B ($m = 0$), then if $\rho > \underline{\rho}$ the incumbent chooses the policy B if the contribution is equal to:

$$c_0 = (2\rho - 1)r - x, \tag{14}$$

while if $\rho < \underline{\rho}$ no contribution is needed.

Lemma 2 is an extension of Lemma 1 where the extra cost x is included. If the bureaucrat has recommended policy A, the incumbent has to pay x to choose B, and this extra cost has to be compensated by the interest group. Therefore, *ceteris paribus*, the contribution is higher. On the other hand, if the bureaucrat has recommended policy B, the incumbent will be more willing to comply with the request of the interest group because the alternative leads to higher cost. Therefore, *ceteris paribus*, the contribution is lower.

It is worth noticing that, with respect to Lemma 1, if the incumbent receives the policy recommendation B, the interest group needs to pay a positive contribution in a smaller set of cases, which is connected to the value of the cost x.

Therefore, if the cost for not complying is higher than the payoff premium for the right matching, the incumbent is willing to comply to the reported message, hence no contribution is needed from the interest group.

4.2 Stage III

In the third stage of the game, given the policy recommended to the incumbent, the interest group decides whether to offer a political contribution and in what amount.

Its objective function is

$$\Pi = \pi(i) - (c_m + b), \tag{15}$$

where at this stage of the game b is fixed, while the political contribution is built as a schedule for any possible choice.

Then, according to different messages, two cases are possible.

Lemma 3 characterises the solution of this stage of the game.

Lemma 3. *Let* $\bar{\rho}_1 \equiv \frac{1+r-x}{2r}$, *then:*

(i) if the bureaucrat recommended policy is A ($m = 1$), then, if $\rho < \bar{\rho}_1$, the interest group offers a positive contribution

$$c_1 = (2\rho - 1)r + x, \tag{16}$$

whereas if $\rho > \bar{\rho}_1$ it does not offer anything.

(ii) if the bureaucrat recommended policy is B (m = 0), then, if $\rho > \underline{\rho}$ the interest group always offer a political contribution equal to:

$$c_0 = (2\rho - 1)r - x, \tag{17}$$

while if $\rho < \underline{\rho}$ the interest group does not offer any contribution.

The intuition of Lemma 3 is the following. If the bureaucrat recommends policy A, the interest group has to compensate the cost that the incumbent suffers for choosing its pet project. However, if the cost is too high, this choice would be unprofitable for the interest group. In that case, it would rather let the incumbent choose A and obtain 0.

If the bureaucrat recommends policy B, the incumbent pays the extra cost for choosing policy A, therefore the interest group takes advantage of this situation and offers a contribution only when needed. Moreover given that, in this case, the cost of the contribution is lower, the choice of offering a contribution is always profitable, since $c_0 < 1$ always.

To be precise at this stage of the game, if $m = 0$, it is possible that in the first stage of the game, the interest group had already paid a bribe to the bureaucrat to recommend the wrong policy. Therefore, the general condition over the contribution would be $c_0 < 1 - b$ and it might be the case that, if b and ρ are large enough, the contribution needed to convince the incumbent to choose policy B would be too expensive for the budget of the interest group.

However, this possibility can be discarded. In fact, it would make no sense for the interest group to pay a bribe to the bureaucrat in exchange for nothing. Paying a bribe would be convenient if it ensured that the incumbent will choose policy B, either by itself or combined with a contribution. If that is not the case, the interest group would be better off without paying the bribe.

Therefore if in the third stage of the game the recommended policy is B, contribution is always feasible, either because no bribe has been paid or because the bribe paid is small enough for the budget constraint not to be binding.

Finally, notice that the actual binding of the budget constraint in the case $m = 1$ depends again on the value of x.

4.3 Stage II

In the second stage of the game, the bureaucrat has to decide which signal to send to the incumbent, given the true state of the world observed and the contribution schedule b received from the interest group.

Lemma 4. *(i) If $\omega = 1$, the bureaucrat recommends policy B in exchange of a bribe equal to*

$$b = \rho^2, \tag{18}$$

and recommends policy A otherwise.

(ii) If $\omega = 0$ the bureaucrat always recommends policy B, regardless of the bribe.

Lemma 4 has two main implications. The first one is that the interest group can always bribe the bureaucrat because the amount required is always lower than 1. The second one is that if $\omega = 0$ the bureaucrat has no incentive to report untruthfully, therefore there is no need for the interest group to pay a bribe.

4.4 Stage I

This section analyses the first stage of the game, hence the choice of the interest group over the bribe to the bureaucrat.

There are two reasons for the interest group to offer a bribe to the bureaucrat. In its best case scenario, ensuring that the policy recommended is B is sufficient to make sure that that one is the chosen policy. However, even if the policy recommendation of the bureaucrat is not sufficient by itself to convince the incumbent to choose B, it reduces the amount of the contribution required to do so. Therefore, the interest group could find more profitable to offer a bribe and a reduced contribution rather than only a single contribution.

At this point of the game, the assumption that the interest group knows ω comes in handy because when deciding the bribe schedule, it allows the interest group to discriminate its offer according to ω.[8]

If $\omega = 0$, the bureaucrat always recommends policy B, therefore the interest group has no need to pay a bribe. Then the interest group has only to choose between two strategies:

- To offer a contribution to the incumbent

- Not to offer a contribution to the incumbent

Given the fact the policy recommended is B, contribution is always a feasible strategy for the interest group.

The following lemma summarises the optimal strategy of the interest group if the state of the world is 0.

Lemma 5. *If $\omega = 0$, the interest group never pays a bribe to the bureaucrat.*

Lemma 5 is an immediate consequence of Lemma 4. If $\omega = 0$ the bureaucrat reports the correct (and favourable to the interest group) message without the need of any external incentive.

If, on the other hand, $\omega = 1$, there are four possible strategies for the interest group.

- the interest group does not offer any bribe to the bureaucrat while offers a contribution to the incumbent

- the interest group offers a bribe to the bureaucrat while does not offer any contribution to the incumbent

- the interest group offers both a bribe to the bureaucrat and a contribution to the incumbent

- the interest group offers neither a bribe nor a contribution

To clarify how the solution proceeds, Figure 2 provides a graphical representation of all the possible paths that the interest group can follow when deciding about the interference into the process.

---

[8]If the interest group does not know the true state of the world it can bargain with the bureaucrat only on the policy recommendation m. Therefore what might happen is that the interest group pays a bribe to the bureaucrat even in cases in which no bribe would be necessary, i.e. if $\omega = 0$.
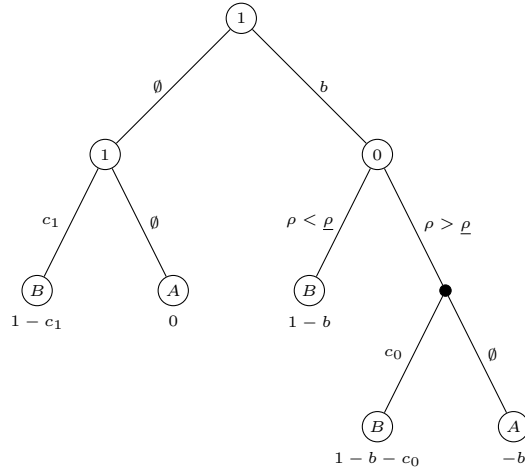
Figure 2: Interest group's strategic tree if $\omega = 1$.
The nodes represent the actions of the other players. The first node is the choice of ω, the second nodes are the choice of m by the bureaucrat and the last nodes are the choice of policy by the incumbent. The edges represent the actions of the interest group.

Lemma 6. *If* $\omega = 1$, *the interest group pays a bribe to the bureaucrat in the following cases:*

(i) *if* $\rho < \underline{\rho}$, *the interest group pays a bribe as long as* $b < c_1$;

(ii) *if* $\rho > \underline{\rho}$, *the interest group pays a bribe as long as* $b < \min\{c_1 - c_0, 1 - c_0\}$.

Lemma 6 states that if the favourable recommendation of the bureaucrat is sufficient to convince the incumbent, the interest group will choose the cheapest option between the bribe and the political contribution.[9] If, however, the favourable recommendation of the bureaucrat is not sufficient to convince the incumbent, the interest group can choose to combine it with a political contribution. If it is the case, the interest group will choose this option if the combination of bribe plus political contribution is both feasible and cheaper than the single political contribution. It is worth to mention here that $b \in (c_1 - c_0, 1 - c_0)$ corresponds to the case in which both the strategies are feasible, but it is cheaper to just pay a higher political contribution rather than to pay both the bureaucrat and the incumbent, while $b \in (1 - c_0, c_1 - c_0)$ corresponds to the case where the interest group cannot convince the incumbent to choose policy B with any instrument at its disposal.

5 The power of the bureaucrat

The previous section provided the characterisation of the game for a given level of x. This section deals with the key question of the paper, i.e. whether it is possible to set up a x such that the final outcome of the decision making process would be better than in the benchmark case.

---

[9]Keep in mind that, on the one hand bribe is always feasible while, on the other hand, contribution is always sufficient to convince the incumbent.

The impact of the watchdog is firstly analysed in the simpler, though insightful, case in which the state of the world is 0, then the analysis moves to the more complex case in which the state of the world is equal to 1.

5.1 The realised state of world is 0

As stated by Lemma 5, the interest group never pays any bribe if the realised state of the world is 0. Moreover Lemma 2 showed that if the policy recommended by the bureaucrat is B, the interest group pays a contribution only if $\rho > \underline{\rho}$. Therefore, the following proposition comes directly from these two results.

Proposition 1. *In the case in which $\omega = 0$ the policy chosen is B regardless of the values of x. In particular*

(i) *if $x > r$, the interest group never pays a contribution;*

(ii) *if $x < r$, the interest group pays a contribution for values of $\rho > \underline{\rho}$.*

The intuition behind Proposition 1 is that if the state of the world is favourable to policy B, then the interests of all players are aligned, therefore the final outcome will always be policy B. In particular, if x is higher than the payoff for the good matching, the incumbent has nothing to gain by overlooking the recommendation of the bureaucrat independently from c, therefore the interest group does not need to pay any contribution. On the other hand, if $x < r$, then it might still be the case that, if ρ is sufficiently large, the incumbent could decide to refuse the recommendation. In this case, the interest group has to offer a contribution to convince the incumbent to choose policy B anyway, and this action always yields a positive profit for the interest group.

5.2 The realised state of world is 1

If the realised state of the world is 1, the analysis is much more complicated, given the three possible alternative strategies of the interest group. However, given that the interest of the paper is to understand whether or not there exist a value of x such that the interest group is not always able to make the incumbent choose B, the analysis can be simplified through the following condition.

Proposition 2. *If $x < 1 - r$, policy A is never the outcome of the game.*

The intuition behind this condition is that if the power of the bureaucrat is not sufficiently strong, the interest group will always have enough resources to buy the incumbent.

Given that the result of Proposition 2 is a necessary condition, it might be the case that the actual choice of the interest group is different from the single contribution to the incumbent. In fact, for values of x sufficiently high the interest group might find more convenient to mix the instruments. However, if the power of the bureaucrat is particularly weak, a single contribution is the only strategy played as stated by the following corollary.

Corollary 1. *If $x < r(1 - r)$*

$$c_1 < b, \ \forall \rho \in \left(\frac{1}{2}, 1 \right), \tag{19}$$

therefore from the point of view of the interest group, not only a single contribution is always sufficient, but it is also cheaper than bribing.

If for the politician the cost of not complying with the recommended policy is too low, the bureaucrat has no real power: the interest group will not change its behaviour with respect to the benchmark case, it will just increase its offer to compensate the incumbent for the extra cost.

This result is very intuitive but meaningful: a watchdog without any real power is not only unable to prevent any malpractice of the incumbent, but at most, it will increase the amount of money present in the decision making process.

Proposition 2 defines a lower bound for the power of the bureaucrat, under which there is no purpose to appoint a watchdog since it would be ineffective. However, as stated by the following proposition, there also exists an upper bound for x.

Proposition 3. *If $x > r$, the interest group only pays the bribe to the bureaucrat and, $\forall \rho \in [0, 1]$, project A is never chosen. Moreover, the amount of the bribe is always higher than the amount of the contribution in the benchmark case.*

In other words, if the bureaucrat is too powerful, practically the incumbent is the actual policy maker, consequently becoming the objective of the lobbying activity.

Moreover, the switch from the political contribution to the bribe turns out to be always more costly for the interest group. However, this can hardly be considered as an improvement with respect to the benchmark case. In fact, the reduction in profits is needed to finance a wasteful transfer to the bureaucrat. Finally, there is also the additional hidden cost of the shifting of power from an elected representative to an unelected official.

Given propositions 2 and 3, the only viable interval for x, where it might be possible to improve the quality of the decision making process, is $(1 - r, r)$. In fact, it is possible to demonstrate that in this interval an improvement with respect to the benchmark situation is always possible.

Proposition 4. *For any $x \in (1 - r, r)$ there always exists $\rho^* < 1$, such that, $\forall \rho \in (\rho^*, 1)$, the policy chosen is A.*

As clearly stated by Proposition 4, if x lies in the interval $(1 - r, r)$, then for sure there is at least one probability distribution for which the interest group is not able to convince the incumbent to choose policy B. This means that if the power of the bureaucrat is sufficiently large, but not too large, and if the *ex ante* probability that policy A is sufficiently high, all the instruments that the interest group can deploy are either insufficient or unaffordable.

6   Conclusions

This paper has shown that, under some circumstances, the presence of a bureaucratic watchdog may actually improve the quality of the decision, even though to a limited

extent. Making the case for those who, in the public debate, support an increasing role of bureaucracy to control politicians' misbehaviour

In a model where an incumbent has to choose a dichotomous policy under the influence of a special interest group and a watchdog bureaucrat, in principle it is possible to assign to the bureaucrat an amount of power sufficiently high not to be irrelevant but not large enough to completely replace the incumbent as the actual policy maker. In this case, for values of ρ sufficiently high, the presence of the bureaucrat allows policy A to be chosen.

In fact, if the bureaucrat has not enough power, then the interest group will behave exactly like if there is no watchdog at all, except for the need to slightly increase the amount of its payment to the incumbent. On the other hand, if the bureaucrat is too powerful, the interest group will switch its attention from the incumbent to the bureaucrat, choosing always to bribe rather than to offer political contributions.

However, the paper has also shown that the effectiveness is quite difficult to implement. Indeed, while the presence of the watchdog always implies an increase in money transfers, this increase in cost is effective in reducing bad matching due to lobbying only for rather large values of ρ. This provides a possible explanation of the unclear results obtained, for example, with the reforms of municipalities in Italy. It also raises the question of how much it is worth reducing the level of accountability in exchange for benefits that are difficult to implement.

Finally, given the fact that many issues are left outside this simple model, there is a great space for further research.

In particular, in this model the policy recommendation from the bureaucrat does not affect at all the beliefs of the incumbent but only imposes an additional cost. This is clearly a limitation of the model, and a more comprehensive framework that entails both effects would be appropriate.

Moreover, even though it is quite common in literature, there is no *a priori* reason to consider r as an exogenous parameter. In fact, another possibility would be to consider a framework where r is endogenous into the game.

This choice would open the possibility to introduce another way to influence the choice of the incumbent, enriching the analysis with different interest groups, that could act on the political side of the choice, rather than through direct economic contributions, which is usually the strategy of NGOs and environmental groups (see for example Yu, 2005).

Appendices

A   Proofs

Proof of Lemma 1.

If lobbying activity is absent the result is immediate.

IF the lobbying activity is allowed, the incumbent chooses to implement policy B only if $G(B) \geq G(A)$ that, given equation (5), implies:

$$c + r(1 - \rho) \geq r\rho, \tag{20}$$

from which it follows that

$$c^* \equiv (2\rho - 1)r, \tag{21}$$

which is positive for any $\rho > \frac{1}{2}$.[10]

The optimal contribution schedule of this game is therefore equal to

$$c^* = \begin{cases} 0 & \text{if} \quad \rho \in (0, \frac{1}{2}] \\ (2\rho - 1)r & \text{if} \quad \rho \in (\frac{1}{2}, 1) \end{cases}, \tag{22}$$

In addition, given that the profit of the interest group, in this case, is equal to 1, the contribution has to fulfil the constraint $c < 1$, implying that:

$$(2\rho - 1)r < 1, \tag{23}$$

which is satisfied as long as

$$\rho < \frac{1 + r}{2r} = \frac{1}{2} + \frac{1}{2r}, \tag{24}$$

which is always greater than one for values of $r \in (\frac{1}{2}, 1)$. Therefore the constraint is never binding, meaning that the interest group can always lobby the incumbent and obtain a positive profit.

Proof of Lemma 2.

If the recommended policy is A $(m = 1)$, the utility function of the incumbent takes the form

$$G = \begin{cases} r\rho & \text{if} \quad i = A \\ c_1 + r(1 - \rho) - x & \text{if} \quad i = B \end{cases}. \tag{25}$$

In this case policy B is chosen if $G(B) > G(A)$:

$$c_1 + r(1 - \rho) - x > r\rho,$$

from which

$$c_1 = (2\rho - 1)r + x. \tag{26}$$

Moreover, for values of $\rho \in (\frac{1}{2}, 1)$, the contribution is always positive, being the sum of two positive quantities.

If the recommended policy is B $(m = 0)$ the utility function takes the form:

$$G = \begin{cases} r\rho - x & \text{if} \quad i = A \\ c_0 + r(1 - \rho) & \text{if} \quad i = B \end{cases}. \tag{27}$$

Project B is chosen if $G(B) > G(A)$ which implies

$$c_0 + r(1 - \rho) > r\rho - x, \tag{28}$$

and then

$$c_0 = (2\rho - 1)r - x. \tag{29}$$

Notice that $c_0 > 0$ implies $(2\rho - 1)r - x > 0$, from which

$$\rho > \frac{r + x}{2r} \equiv \underline{\rho}. \tag{30}$$

---

[10]The usual underlying assumption is that, when indifferent, the incumbent chooses the preferred outcome of the interest group.

Proof of Lemma 3.

The first part of the proof deals with the case $m = 1$.

In this case, given the analysis of the previous stages, and recalling that if $m = 1$ it follows immediately that $b = 0$, the profit function of the interest group is equal to

$$\Pi(i) = \begin{cases} 1 - c_1 & \text{if} \quad c_1 \neq 0 \\ 0 & \text{if} \quad c_1 = 0 \end{cases}. \tag{31}$$

The interest group will offer a contribution only if its profit is positive, i.e. if $c_1 < 1$ which is true if

$$\rho < \frac{1 + r - x}{2r} \equiv \bar{\rho}_1 \tag{32}$$

Therefore, the contribution schedule takes the following form

$$c_1 = \begin{cases} (2\rho - 1)r + x & \text{if} \quad \rho \in (\frac{1}{2}, \bar{\rho}] \\ 0 & \text{if} \quad \rho \in (\bar{\rho}, 1) \end{cases}, \tag{33}$$

The second part of the proof deals with the case $m = 0$.

The main differences, in this case, are that b may be different from zero and that for $\rho < \underline{\rho}$ contribution is not needed since $m = 0$ is *per se* enough to convince the incumbent to choose policy B. However, if $\rho > \underline{\rho}$ this is not true, and a contribution is needed to ensure that policy B is the chosen one even in presence of a favourable recommendation by the bureaucrat.

The profit function then takes the form:

$$\Pi(i) = \begin{cases} 1 - b - c_0 & \text{if} \quad c_0 \neq 0 \\ 1 - b & \text{if} \quad c_0 = 0 \quad \text{and} \quad \rho \in (\frac{1}{2}, \underline{\rho}] \\ -b & \text{if} \quad c_0 = 0 \quad \text{and} \quad \rho \in (\underline{\rho}, 1) \end{cases}. \tag{34}$$

As in the previous case, the interest group is willing to contribute as long as it is profitable. In this case however, the bribe possibly paid to the bureaucrat has to be taken into account. Therefore the budget constraint is $c_0 < 1 - b$.
This requires:

$$\rho < \frac{1 - b + r + x}{2r}.$$

Even if this is not true in general, it is immediate to recognise that, if no bribe has been paid in the previous stage, i.e. if $b = 0$, the political contribution is always a feasible option. However it has already been discussed why either $b = 0$ or it is such that $b + c_0 < 1$ for any value of c_0.

The contribution schedule assumes the following form:

$$c_0 = \begin{cases} 0 & \text{if} \quad \rho \in (\frac{1}{2}, \dot{\rho}] \\ (2\rho - 1)r - x & \text{if} \quad \rho \in (\dot{\rho}, 1) \end{cases}. \tag{35}$$

Proof of Lemma 4.

If $\omega = a$ the objective function of the bureaucrat takes the following form.

$$V(m) = \begin{cases} 0 \\ b - \rho^2 \end{cases}. \tag{36}$$

The bureaucrat will choose $m = 0$ if $V(b) \geq V(a)$, which implies:

$$b - \rho^2 \geq 0, \tag{37}$$

from which it follows that:

$$b = \rho^2, \tag{38}$$

which is always lower than 1.

If $\omega = b$, the objective function of the bureaucrat is equal to:

$$V(m) = \begin{cases} -(1-\rho)^2 \\ b \end{cases}. \tag{39}$$

In this case then, $V(a) < 0$. Therefore the interest group prefers to recommend policy B as long as b is non negative. The minimum bribe necessary to obtain $m = 0$ is therefore:

$$b = 0. \tag{40}$$

Proof of Proposition 1.

It has already been showed that in the case $\omega = 0$ the interest group needs to interfere with the decision process through a contribution only if $\rho > \underline{\rho}$.

However, if $x > r$, it follows that $\underline{\rho} > 1$; therefore there is never the need for the interest group to offer a contribution to the incumbent.

In this case, it follows that

$$b = c_0 = 0, \tag{41}$$

with associated final profits for the interest group

$$\pi = 1. \tag{42}$$

On the other hand, if $x < r$, it follows that $\underline{\rho}$, therefore there are cases in which the interest group has to offer a positive contribution to the incumbent.

$$c_0 = \begin{cases} 0 & \text{if } \rho \in (\frac{1}{2}, \underline{\rho}] \\ (2\rho - 1)r - x & \text{if } \rho \in (\underline{\rho}, 1) \end{cases}, \tag{43}$$

with associated profit

$$\pi = \begin{cases} 1 & \text{if } \rho \in (\frac{1}{2}, \underline{\rho}] \\ 1 - (2\rho - 1)r + x & \text{if } \rho \in (\underline{\rho}, 1) \end{cases}. \tag{44}$$

Proof of Proposition 2.

The necessary condition can be derived directly from the feasibility of c_1. In fact, as stated by Lemma 2, the direct contribution to the incumbent is always sufficient for the interest group to obtain B as long as its cost is lower than 1, i.e. as long as

$$\rho < \bar{\rho}_1. \tag{45}$$

Therefore if $\bar{\rho}_1 > 1$ contribution is always feasible, meaning that policy B will always be selected, from which the necessary condition:

$$\frac{1 + r - x}{2r} > 1 \iff x < 1 - r \tag{46}$$

Proof of Corollary 1.

First of all the condition $c_1 < b$ requires:

$$(2\rho - 1)r + x < \rho^2, \tag{47}$$

which implies

$$\rho^2 - 2r\rho + r - x > 0. \tag{48}$$

The associated Δ is equal to

$$\Delta = 4(r^2 - r + x). \tag{49}$$

Therefore, if $x < r(1 - r)$, $\Delta < 0$ and hence either contribution or bribe is always the cheaper alternative; to prove that the former is the case, assume $x = r(1-r) - \epsilon$, inequality (48) is then equal to

$$\rho^2 - 2r\rho + r - (r(1 - r) - \epsilon) = $$
$$= (\rho - r)^2 + \epsilon > 0. \tag{50}$$

which is clearly always true.

Proof of Proposition 3.

As already proved in Proposition 1, if $x > r$, the incumbent always comply with the policy recommended by the bureaucrat, therefore no additional contribution is needed.

It then follows that the interest group has to decide between the single contribution or the bribe, and it will choose the cheaper.

Given that, in this case, $\Delta > 0$, equation (48) implies that $b < c_1$ if $\rho \in [\hat{\rho}_1, \hat{\rho}_2]$, where

$$\begin{cases} \hat{\rho}_1 = r - \sqrt{r^2 - r + x} \\ \hat{\rho}_2 = r + \sqrt{r^2 - r + x} \end{cases}. \tag{51}$$

However, for $x > r$, if follows that

$$\begin{cases} \hat{\rho}_1 < 0 \\ \hat{\rho}_2 > 1 \end{cases}, \tag{52}$$

therefore

$$b < c_1 \quad \forall \, \rho. \tag{53}$$

To prove the last part of the proposition, recall that the contribution that the interest group pays in the benchmark case is equal to $(2\rho - 1)r$. Therefore, the following inequality has to be studied.

$$\rho^2 \geq (2\rho - 1)r. \tag{54}$$

19

The associated $\Delta = 4r(r-1)$ is always negative.

Then one can simply notice that for any couple of values of (ρ, r) in their allowed space of value, the condition holds with strict inequality, for example, if $\rho = \frac{1}{2}$ the LHS is positive while the RHS is null.

Proof of Proposition 4.

In the case in which $\omega = 1$, in order to convince the incumbent to choose policy B, the interest group has in general three instruments: it can decide to offer a single contribution to the incumbent, a single bribe to the bureaucrat, or to mix the instruments.

The proof of the sufficient condition requires the existence of a ρ^* such that for $\rho > \rho^*$ only to bribe the bureaucrat is not sufficient to ensure that policy B is selected while both c_1 and $b + c_0$ are greater than one. The first situation corresponds to the condition $\rho > \bar{\rho}_1$, while the second one to the condition $\rho > \underline{\rho}$.

The condition $b + c_0 > 1$ can be written as:

$$(2\rho - 1)r - x + \rho^2 > 1, \tag{55}$$

$$\rho^2 + 2r\rho - r - x - 1 > 0, \tag{56}$$

the corresponding equation has two solutions

$$\begin{cases} \rho = -r - \sqrt{r^2 + r + x + 1} \\ \rho = -r + \sqrt{r^2 + r + x + 1} \end{cases},$$

where the first one is always negative.

Therefore, defining the second solution as $\bar{\rho}_0$, it follows that $b + c_0 > 1 \quad \forall \rho > \bar{\rho}_0$.

In order to prove the proposition, it has to be proved that, for $x \in (1-r, r)$, there exist ρ^* such that for $\rho > \rho^*$. This is equivalent to proving that for $x \in (1 - r, r)$:

$$\begin{cases} \bar{\rho}_1 < 1 \\ \bar{\rho}_0 < 1 \\ \underline{\rho} < 1 \end{cases}, \tag{57}$$

substituting, solving and rearranging with respect to x

$$\begin{cases} x > 1 - r \\ x < r \\ x < r \end{cases}. \tag{58}$$

Therefore $\forall x \in (1 - r, r)$ it follows that it is always possible to define ρ^* in the following way:

$$\rho^* \equiv \max\{\bar{\rho}_1, \bar{\rho}_0, \underline{\rho}\} \tag{59}$$

such that $\forall \rho > \rho^*$, policy A is selected.

B The weight of the contribution

In the literature it is often the case that the value of contributions are weighted through a parameter α, (see Bennedsen & Feldmann, 2006b), which can be interpreted as the relative value that each agent places to the transfer. In this context, this would be a measure of the greediness of each agent.

Formally by fixing at 1 the cost of contributions made by the interest group,[11], it is obtained

$$G(i) = \begin{cases} \alpha c(i) + rp(i) - x & \text{if } i \neq m \\ \alpha c(i) + rp(i) & \text{if } i = m \end{cases}, \tag{60}$$

and

$$V = \begin{cases} \beta b(m) - (\rho - m)^2 & \text{if } m \neq \omega \\ \beta b(m) & \text{if } m = \omega \end{cases}. \tag{61}$$

Since, in principle, there is no reason to assume that the incumbent and the bureaucrat attach the same weight to contributions.

Notice that these parameters have a relevant impact on the model: if α and β are sufficiently low, then it may be the case that, for sufficiently high levels of ρ, the interest group is not able to move the final decision in favour of its own pet project neither by offering a contribution, nor with a bribe, hence improving the situation for all cases.

However, in order to obtain this outcome, both α and β need to be lower than 1.

On the other hand, if they are larger than 1, then it would be almost impossible to set up a mechanism that would avoid the interest group to be successful in its objective.

In conclusion, there is no *a priori* reason to assume these parameters to be higher or lower than 1. On the other hand, the assumption of $\alpha = \beta = 1$ is totally plausible and has the advantage of greatly simplifying computations.

References

Austen-Smith, D. & Wright, J. R. (1992). Competitive lobbying for a legislator's vote. *Social Choice and Welfare, 9*(3), 229–257.

Bennedsen, M. & Feldmann, S. E. (2006a). Informational lobbying and political contributions. *Journal of Public Economics, 90*(4-5), 631–656.

Bennedsen, M. & Feldmann, S. E. (2006b). Lobbying Bureaucrats. *Scandinavian Journal of Economics, 108*(4), 643–668.

Bernheim, B. D. & Whinston, M. D. (1986). Menu auctions, resource allocation, and economic influence. *The quarterly journal of economics, 101*(1), 1–31.

Boehmke, F. J., Gailmard, S., & Patty, J. W. (2005). Whose Ear to Bend? Information Sources and Venue Choice in Policy-Making. *Quarterly Journal of Political Science, 1*(February), 139–169.

---

[11]Event though in principle it can also be different from 1.

Cotton, C. S. & Déllis, A. (2016). Informational Lobbying and Agenda Distortion. *Journal of Law, Economics, and Organization*, *32*(4), 762–793.

Crawford, V. P. & Sobel, J. (1982). Strategic information transmission. *Econometrica: Journal of the Econometric Society*, 1431–1451.

Dahm, M. & Porteiro, N. (2008a). Informational lobbying under the shadow of political pressure. *Social Choice and Welfare*, *30*(4), 531–559.

Dahm, M. & Porteiro, N. (2008b). Side effects of campaign finance reform. *Journal of the European Economic Association*, *6*(5), 1057–1077.

Epstein, D. & O'halloran, S. (1994). Administrative procedures, information, and agency discretion. *American Journal of Political Science*, 697–722.

Epstein, D. & O'halloran, S. (1999). *Delegating powers: A transaction cost politics approach to policy making under separate powers.* Cambridge University Press.

Ferejohn, J. (1986). Incumbent performance and electoral control. *Public choice*, *50*(1-3), 5–25.

Gailmard, S. (2002). Expertise, subversion, and bureaucratic discretion. *Journal of Law, Economics, and Organization*, *18*(2), 536–555.

Grossman, G. M. & Helpman, E. (1994). Protection for Sale. *American Economic Review*, *84*(4), 833–50.

Grossman, G. M. & Helpman, E. (2001). *Special interest politics.* MIT press.

Kartik, N. (2009). Strategic communication with lying costs. *The Review of Economic Studies*, *76*(4), 1359–1395.

Maskin, E. & Tirole, J. (2004). The Politician and the Judge: Accountability in Government. *American Economic Review*, *94*(4), 1034–1054.

Pei, H. D. (2015). Communication with endogenous information acquisition. *Journal of Economic Theory*, *160*, 132–149.

Yu, Z. (2005). Environmental protection: A theory of direct and indirect competition for political influence. *The Review of Economic Studies*, *72*(1), 269–286.