A Theory of Policy Advice

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This article analyzes a model of the policy decision process in ministerial governments. A spending minister and a finance minister are involved in making a decision concerning a public project. The two ministers have partially conflicting preferences. Policy decisions are made in two stages. In the first stage the spending minister consults a technical expert to obtain information about the technical consequences of the project. If the technical consequences are favourable, in the second stage the finance minister consults a financial expert to obtain information about the financial consequences. The finance minister can veto a proposal for undertaking the project. This article illustrates the consequences of specialization for information transmission. A drawback of specialization is that projects are evaluated on the basis of their individual consequences rather than on the basis of their total consequences.

1. Introduction

A common problem faced by political actors is the need to rely on information provided by experts. In the last two decades, several authors have developed models of the interaction between political agents and experts. Usually the starting point is a politician, who has to make a policy decision under uncertainty. In order to avoid a wrong decision the politician can consult an expert. The expert is often referred to as a bureaucrat or a policy adviser. This literature typically addresses two types of questions. First, to what extent does the interaction between political agents and experts lead to an efficient use of information? And second, who has the greater influence on policy decisions, political agents or experts? Without a doubt, the existing literature has contributed much to our understanding of the policy formation process. Several authors have identified the conditions under which experts’ recommendations are credible to political agents (Calvert, 1985; Crawford and Sobel, 1982; Lupia and McCubbins, 1994, 1998; Milgrom and Roberts, 1986; and Letterie and Swank, 1997). Moreover,
several authors have shown how institutional features may constrain experts to exploit their information advantage (see, e.g., Banks and Weingast, 1992; Bawn, 1992; Bendor, Taylor, and Van Gaalen, 1985; McCubbins, Noll, and Weingast, 1987; and McCubbins and Schwartz, 1984).

The literature on the interaction between elected politicians and experts has much to offer. However, in our view it pays too little attention to four common features of the policy-making process. First, in most countries the government is not a coherent entity (Tirole, 1994). Individual politicians are often not supposed to maximize social welfare, but rather are to pursue a limited goal. For example, the Minister of Environmental Affairs is expected to protect the environment rather than to care about the interests of firms; the latter interests are promoted by the Minister of Industry. Second, many policies have a host of consequences, all being surrounded with uncertainty. Few experts, if any, have expertise on all possible consequences. In general, experts are specialists who owe their information advantage to paying extraordinary attention to a specific area. A direct consequence of this kind of specialization is that to obtain information about complex policies policymakers have to rely on many experts (economists, sociologists, technicians, lawyers, etc.). Third, experts differ. Faced with the same policy problem, experts will yield different answers. This is most clearly stated in Fuchs et al. (1998:1389), who found that among economic experts “policy positions are usually more closely related to differences in values than to differences in estimates of what we judge to be relevant economic parameters.” The importance of differences in policy values goes, in our view, to the heart of understanding the policy-making process. Indeed Fuchs (1996:15) once stated that economists as policy advisers have been quite ineffective in the U.S. health care reform debate because of their inability to make value differences in the debate explicit. Fourth, politicians have the power to appoint experts. Directly or indirectly they choose the experts they consult.

To improve our understanding of the policy formation process, this article addresses these four features. We present a model of the policy formation process that has the following characteristics. First, two political agents are involved in making a decision about a public project. The first political agent is referred to as the spending minister and the second as the finance minister. These two political agents have (partially) conflicting preferences. This characteristic of the model reflects the fact that the government is not a homogeneous entity. The clash over departmental goals is widely recorded as a characteristic of most governments. For example, Heclo and Wildavsky (1984) show in great detail how the British civil service is divided by two cultures: those representing the spending departments versus those of the treasury. Former CEA chairman Herbert Stein (1996:12) remembers numerous instances of clashes between the CEA chairman and the secretary of the treasury. Second, the project has two types of consequences which are both uncertain. The two political agents have incomplete information about both types of consequences of the project. There are two types of experts: experts who know the first type of consequences, and experts who know the second type of consequences. This characteristic of the model reflects specialization. Third, political agents appoint their experts.
When hiring bureaucrats or experts, they look at the applicants’ preferences over policies. The spending minister is assumed to appoint a “technical” expert, and the minister of finance is assumed to appoint an expert who is able to assess the financial consequences of policies. Fourth, communication between advisers and political actors is imprecise. Experts are unable to explain the exact consequences of policies. Rather, they can only advise the politicians to undertake a project or to maintain the status quo. Though this assumption is restrictive, it has some appeal in that in the real world politicians often lack the time to examine the host of reports produced by experts. Moreover, in many cases one may wonder whether politicians fully understand the technical details of policy reports. This feature of the model means that reports of experts can be interpreted as policy recommendations. As such, the reports are “cheap talk” (Austin-Smith, 1993).

One interpretation of our model is that it describes the policy decision-making process in ministerial governments. In these governments individual ministers are responsible for the policy areas that fall under their jurisdiction. As the head of the department, each minister has appointment power: he can choose the people assisting him. An important feature of the bureaucracy in ministerial governments is “its fragmentation according to specific policy areas” (Andeweg and Bakema, 1994). In ministerial governments, the power of spending ministers is usually constrained by the minister of finance. The power of the minister of finance varies across countries. In Germany, for example, the minister of finance has the power to veto all proposals with financial consequences (Müller-Rommel, 1994). In other countries, the minister of finance has less formal power. Yet spending ministers often identify the minister of finance as a major constraint on their capacity to advance new policy proposals (see, e.g., Farrell, 1994; King, 1994).

An alternative interpretation of the model is that it describes the information transmission from informed to less informed agents in direct legislative elections. In these elections voters choose between specific policy alternatives. In general, ordinary voters are less informed about the consequences of initiatives than the agents submitting them. However, voters may infer information from what they know about the proposer’s preferences. Moreover, uninformed voters can acquire information about proposals by emulating the behavior of well-informed voters (see Lupia, 1994). Obviously the amount of information transmitted depends heavily on the credibility of the informed voters.

In this article we try to explain the behavior of political actors and advisers in a political system that is characterized by division of tasks and asymmetric information. We address questions like: Who are the experts assisting political actors? Why do political actors attend to sources that share their own predispositions? Do political actors or their experts make public decisions?

This article is organized as follows. Section 2 discusses the model. In Section 3, we analyze the equilibria of the game. Section 4 discusses the role of advisers in the policy decision process. Section 5 concludes.

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1. We owe this interpretation to one of the referees.
2. The Model

The model focuses on some specific features of the policy-making process in order to examine how division of political tasks and specialized advisers affect policy outcomes. The model describes the behavior of four agents: two political agents and two advisers.

Let us first introduce the political agents. The first political agent is charged with the responsibility of developing plans in a certain policy domain. This agent is referred to as the spending minister, player S. The second political agent is the finance minister, player F.

The model revolves around a certain project \((X)\) which nature reveals to player S. With respect to this project, there are two alternatives: the project is undertaken \((X = 1)\), or the status quo is maintained \((X = 0)\). If the project is undertaken, the payoffs to S and F are given by

\[
\Pi_S(X = 1|\epsilon, \mu) = s + \epsilon + \mu \tag{1}
\]

and

\[
\Pi_F(X = 1|\epsilon, \mu) = f + \epsilon + \mu, \text{ with } s > f, \tag{2}
\]

respectively. In Equations (1) and (2) the symbol \(s (f)\) denotes the extent to which S(F) is biased toward undertaking the project. The spending minister’s and the finance minister’s motives are not perfectly aligned. The spending minister is evaluated on the basis of how well he does his specialized job. This gives him an incentive to promote the parochial interests of his department. The finance minister cares about the policies in all policy areas. As a consequence, his interests are broader than those of the individual spending minister. The consequences of the project are surrounded with uncertainty. The benefits of the project, \(\epsilon\), are uncertain, and so are the financial consequences, \(\mu\). Both \(\epsilon\) and \(\mu\) are stochastic terms that are uniformly distributed over the interval \([-t, t]\). The political actors do not observe \(\epsilon\) and \(\mu\). By normalization, the payoffs to S and F equal zero if the status quo is maintained, \(\Pi_S(X = 0) = \Pi_F(X = 0) = 0\).

Throughout this article it is assumed that \(t > |s|\) and \(t > |f|\). These assumptions ensure that the realizations of \(\epsilon\) and \(\mu\) determine whether or not the two political players benefit from undertaking the project. As a consequence, the political players have an incentive to gather information about \(\epsilon\) and \(\mu\). To minimize algebra, the payoff functions are kept as simple as possible. Three assumptions underlying Equations (1) and (2) are not without loss of generality. First, the payoff function is linear, implying that the players are risk neutral, so that information is not a “public good.” Accordingly, the political actors only gather information about \(\epsilon\) and \(\mu\) to avoid a wrong decision (undertaking the project if Equations (1) and (2) are negative or maintaining the status quo if Equations (1) and (2) are positive). Second, the political actors evaluate the uncertain consequences of the project in the same way. In the real world, the evaluation of \(\epsilon\) and \(\mu\) may depend on \(p\) and \(s\). Third, the properties of \(\epsilon\) and \(\mu\) are described by the same distribution function. Relaxing the second and third restriction makes the model more general, but does not affect the spirit of the model.
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Let us now introduce the two other players. Both the spending minister and the finance minister have the authority over a research staff. The research staff of the spending minister, player AS, is specialized in assessing the benefits of the project, $\epsilon$. The research staff of the finance minister, player AF, consists of experts on the financial consequences of the project, and observes $\mu$. The spending minister and the finance minister are laymen in the sense that they do not observe $\epsilon$ and $\mu$, and are unable to communicate with their research staffs about the exact values of the stochastic terms. The two research staffs can only advise their clients to undertake the project or to maintain the status quo. This means that the research staffs operate as policy advisers. Like the two political players in the model, AS and AF are characterized by their predispositions toward the project, $as$ and $af$, respectively. Their payoffs are given by

\[
\begin{align*}
\Pi_{AS}(X = 1|\epsilon, \mu) &= as + \epsilon + \mu, \\
\Pi_{AF}(X = 1|\epsilon, \mu) &= af + \epsilon + \mu, \\
\Pi_{AS}(X = 0) &= \Pi_{AF}(X = 0) = 0.
\end{align*}
\]

One of the main objectives of this article is to examine the characteristics of advisers. Both the spending minister and the finance minister appoint the advisers working for them. It is assumed that there exists a continuum of applicants for the research jobs in terms of their predispositions ($as$ and $af$) toward the project. The parameters $as$ and $af$ are choice variables for the spending minister and the finance minister, respectively.

Now that we have discussed the players in the model and their motives, let us elaborate on the institutional environment in which the players operate. The total policy space is partitioned into several policy jurisdictions. For each jurisdiction a minister is charged with the responsibility to develop ideas about projects. The selection of the projects to be undertaken takes place in two stages. In the first stage, the finance minister sets aside all projects which are not supported by the advisers of the ministers (without research on their financial consequences). In the second stage, the financial consequences of all projects which have passed the first round are assessed by the adviser of the finance minister. The adviser informs the finance minister, who then decides whether or not to veto the proposal.

The assumed institutional setting is admittedly an ad hoc one, although we believe that it captures some features of reality. In principle, the institutional setting implies that proposals for undertaking projects only survive if spending ministers are able to make “a case.” In this respect, the position of the minister resembles the position of a prosecutor who must have some evidence against a suspect to start a trial. One reason that the finance minister demands that projects should at least be supported by the research staff of the spending minister is that costs are attached to estimating the financial consequences of projects. As we will see later, the expected benefits from research on the financial consequences of projects are higher when the projects are supported by the research staff of
A Theory of Policy Advice

Table 1. The Game Between a Spending Minister, the Finance Minister, and Their Advisers

<table>
<thead>
<tr>
<th>Players</th>
<th>S, F, AS, and AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order of actions</td>
<td></td>
</tr>
<tr>
<td>(0) Nature chooses a project with $\epsilon$ and $\mu$; $\epsilon$ and $\mu$ are uniformly distributed on $[-t, t]$.</td>
<td></td>
</tr>
<tr>
<td>(1) S chooses $as \in (-\infty, \infty)$, AS observes $\epsilon$.</td>
<td></td>
</tr>
<tr>
<td>(2) AS sends message $m_{AS} \in {Y_{AS}, N_{AS}}$, if $m_{AS} = N_{AS}$ the game ends, and $X = 0$.</td>
<td></td>
</tr>
<tr>
<td>(3) F chooses $af \in (-\infty, \infty)$, AF observes $\mu$.</td>
<td></td>
</tr>
<tr>
<td>(4) AF sends message $m_{AF} \in {Y_{AF}, N_{AF}}$.</td>
<td></td>
</tr>
<tr>
<td>(5) F chooses $X \in {0, 1}$.</td>
<td></td>
</tr>
</tbody>
</table>

**Payoffs**

$UI(X = 1|\epsilon, \mu) = i + \epsilon + \mu$, where $l = \{S, F, AS, AF\}$ and $i = \{s, f, as, af\}$ with $t > s > f$

$UI(X = 0) = 0$.  

the proposer. If the costs of doing research are moderately high, it is optimal to set aside projects which are not supported by a research staff.

The model can be formalized as a dynamic game with asymmetric information. Table 1 summarizes the game.

3. Equilibria

The game described in Table 1 has several perfect Bayesian equilibria. Necessary conditions for these equilibria are that each player’s strategy is optimal given the beliefs and strategies of the other players, and that the players’ beliefs are based on priors updated by Bayes’ rule. In this section we discuss the equilibria of the game.

The game consists of two stages. In the first stage S chooses an adviser AS, who observes $\epsilon$. AS sends a message about the desirability of the project. In the second stage, F appoints an adviser AF, who observes $\mu$. After AF has sent a message, F makes a decision concerning the project. To ensure a time consistent solution, we start by analyzing the second stage of the game.

By assumption, F and AF act only if $m_{AS} = Y_{AS}$. When F makes a decision concerning the project, he has received a message from AF. If AF has sent $m_{AF} = Y_{AF}$, then the expected payoff to F is equal to

$$E[\Pi_F(X = 1|m_{AS} = Y_{AS} \land m_{AF} = Y_{AF})] = f + E(\epsilon|m_{AS} = Y_{AS}) + E(\mu|m_{AF} = Y_{AF}).$$

(6)

If AF has sent $m_{AF} = N_{AF}$, the expected payoff to F is equal to

$$E[\Pi_F(X = 1|m_{AS} = Y_{AS} \land m_{AF} = N_{AF})] = f + E(\epsilon|m_{AS} = Y_{AS}) + E(\mu|m_{AF} = N_{AF}).$$

(7)

On the basis of Equations (6) and (7), three cases can be distinguished. First, both Equations (6) and (7) are negative. In this case it is optimal for F to choose $X = 0$, irrespective of the message sent by AF. Second, both Equations (6) and (7) are positive, so that F should always choose $X = 1$. Finally, Equation (6) is
positive and Equation (7) is negative. In this case it is optimal for F to choose \( X = 1 \) if \( m_{AF} = Y_{AF} \) and to choose \( X = 0 \) if \( m_{AF} = N_{AF} \).

Now consider the problem AF faces. Adviser AF benefits from the project if
\[
a f + E(\epsilon|m_{AS} = Y_{AS}) + \mu > 0. \tag{8}
\]
Suppose that F chooses \( X = 1 \) if \( m_{AF} = Y_{AF} \) and \( X = 0 \) if \( m_{AF} = N_{AF} \). Then the optimal response of AF is to send \( m_{AF} = Y_{AF} \) if Equation (8) holds, and to send \( m_{AF} = N_{AF} \) otherwise. Bayes’ rule implies
\[
E(\mu|m_{AF} = Y_{AF}) = 1/2[t - af - E(\epsilon|m_{AS} = Y_{AS})] \tag{9}
\]
\[
E(\mu|m_{AF} = N_{AF}) = -1/2[t + af + E(\epsilon|m_{AS} = Y_{AS})]. \tag{10}
\]
Clearly if Equations (9) and (10) imply that Equation (6) is positive and Equation (7) is negative, then the strategies of F and AF are optimal responses to each other. These strategies form a partially pooling or informative equilibrium in which the message sent by AF contains information about \( \mu \) and induces F’s action (Farrell and Gibbons, 1989). If Equations (9) and (10) imply that Equations (6) and (7) have the same sign, then only pooling equilibria exist: the message sent by AF does not affect F’s decision concerning the project.

It should be pointed out that a pooling equilibrium also exists if Equations (9) and (10) have opposite signs. In this case a pooling equilibrium requires that F always ignores AF’s message, and that AF’s message is independent of the realization of \( \mu \) (for example, AF always sends \( m_{AF} = Y_{AF} \)). These strategies imply that the posterior belief about \( \mu \) is equal to the prior belief: \( E(\mu) = E(\mu|m_{AF} = Y_{AF}) = E(\mu|m_{AF} = N_{AF}) = 0 \). Clearly, given these posterior beliefs, the posited strategies are optimal responses to each other. However, the pooling equilibrium is not stable. If there is an infinitesimal probability that F does not ignore AF’s message, AF has an incentive to send \( m_{AF} = Y_{AF} \) if Equation (8) holds, and \( m_{AF} = N_{AF} \) otherwise. But then it is optimal for F to follow his adviser’s message, so that a partially pooling equilibrium occurs. Hence, if a partially pooling equilibrium exists, a pooling equilibrium is not stable and unlikely to occur.

With partially pooling strategies, the expected payoff to F is equal to the probability that AF sends \( m_{AF} = Y_{AF} \) multiplied by Equation (6). Using Equation (9), we obtain
\[
E(\Pi_F|m_{AS} = Y_{AS}) = Pr(m_{AF} = Y_{AF})E[\Pi_F(X = 1|m_{AS} = Y_{AS} \land m_{AF} = Y_{AF})]
= \frac{1}{2t}[t + ap + E(\epsilon|m_{AS} = Y_{AS})][p + 1/2E(\epsilon|m_{AS} = Y_{AS})]
+ 1/2(t - ap)]. \tag{11}
\]

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2. We ignore semantic problems. Thus we do not consider the case that Equation (6) is negative and Equation (7) is positive. Except for semantics, this case is identical to the third case.
F should appoint an adviser whose predisposition, \( af \), maximizes Equation (11). It is easy to show that \( af = f \) maximizes Equation (11).

Using \( af = f \), and Equations (6), (7), (9), and (10), it is straightforward to derive the conditions for a partially pooling equilibrium:

\[
f + t + E(\epsilon|m_{AS} = Y_{AS}) > 0 \tag{12}
\]

and

\[
f - t + E(\epsilon|m_{AS} = Y_{AS}) < 0 \tag{13}
\]

Since by assumption \( t > |f| \) and \( E(\epsilon|m_{AS} = Y_{AS}) \geq 0 \), Equation (12) always holds. It is easy to see that if the above conditions are violated, information about \( \mu \) will never induce F to change his decision concerning the project. The reason is that even if \( \mu \) were highly unfavorable (favorable), F would benefit (suffer) from undertaking the project. To put it differently, if Equation (12) or Equation (13) is violated, information about the project is not useful (cf. Lupia and McCubbins, 1998:6). In contrast, if Equations (12) and (13) are satisfied, information about \( \mu \) helps F to avoid a wrong decision. Then the only stable equilibrium in the second stage of the game is a partially pooling one. In this partially pooling equilibrium, F confronts AF with exactly the same decision problem he himself would face if he had observed \( \mu \). As a consequence, AF makes the same decision concerning the project as F would make if he had observed \( \mu \). This means that communication between F and AF is perfect (cf. Calvert, 1985; Lupia and McCubbins, 1994, 1998).

Let us now analyze the first stage of the game. All players acting in the first stage of the game anticipate the strategies players will follow in the second stage. Suppose that in the second stage of the game pooling strategies are followed [Equation (13) is violated, so that \( m_{AS} = Y_{AS} \) induces F to choose \( X = 1 \)]. It is straightforward to show that under those circumstances it is optimal for S to choose \( as = s \), and it is optimal for AS to send \( m_{AS} = Y_{AS} \) if \( \epsilon > -as \), and to send \( m_{AS} = N_{AS} \) otherwise. However, given these strategies and the assumption that \( |f| < |s| < t \), the posterior beliefs about \( \epsilon \) imply that Equation (13) is satisfied. Hence, if information about the consequences of the project is relevant for F, there does not exist an equilibrium of the game in which in the second-stage pooling strategies are followed.

Now suppose that in the second stage of the game communication occurs between F and AF. By assumption the game ends if \( m_{AS} = N_{AS} \). As a consequence, AS will send \( m_{AS} = Y_{AS} \) if he expects to benefit from the project, and \( m_{AS} = N_{AS} \) if he expects to lose from the project. If AS sends \( m_{AS} = Y_{AS} \), the decision concerning the project depends on the message sent by AF. Anticipating that F chooses \( X = 1 \) if AF sends \( m_{AF} = Y_{AF} \), and \( X = 0 \) if AF sends \( m_{AF} = N_{AF} \), AS expects to benefit from the project if

\[
\epsilon > -as - E(\mu|m_{AF} = Y_{AF}). \tag{14}
\]

Thus AS sends \( m_{AS} = Y_{AS} \) if Equation (12) holds, and \( m_{AS} = N_{AS} \) otherwise. Note that although AS has no information about the realization of \( \mu \), its action is based on the assumption that AF advises F to undertake the project. One
interpretation of this is that AS assumes that the financial consequences of the project are favorable. This does not imply that AS takes an overly optimistic view of the financial consequences of the project. Rather it shows that AS anticipates that for unfavorable political consequences, AF sends \( m_{AF} = N_{AF} \), which induces F to reject the project.

After substitution of Equation (7) into Equation (14), Bayes’ rule implies:

\[
E(\epsilon|m_{AS} = Y_{AS}) = \frac{2}{3}\left(\frac{1}{2}t - as + \frac{1}{2}f\right)
\]

and

\[
E(\epsilon|m_{AS} = N_{AS}) = \frac{1}{3}(f - 2t - 2as).
\]

Finally, consider the problem S faces concerning the choice of \( as \). The strategies of the other players who act after S imply that the project will only be undertaken if both AF and AS advise that the project should be undertaken. At the time player S chooses \( as \), the expected payoff to S is equal to the probability that AS sends \( m_{AS} = Y_{AS} \) multiplied with the probability that AF sends \( m_{AF} = Y_{AF} \), multiplied by the payoff to S conditional on these messages and given that the project is undertaken. Hence, when choosing \( as \), the expected payoff to S is given by

\[
E(\Pi_S) = \Pr(m_{AS} = Y_{AS}) \Pr(m_{AF} = Y_{AF})[s + E(\epsilon|m_{AS} = Y_{AS}) + E(\mu|m_{AF} = Y_{AF})]\frac{1}{3t}(2t + 2as - f)\frac{1}{3t}(2t + 2f - as)\left(s + \frac{2}{3}t - \frac{1}{3}f - \frac{1}{3}as\right).
\]

Equation (16) gives the expected payoff to S as a third-order function of \( as \). Clearly the payoff to S equals zero if \( \Pr(m_{AS} = Y_{AS}) \) and \( \Pr(m_{AF} = Y_{AF}) \) are nonpositive. For this reason \( as \) must lie in the interval \((1/2p - t, 2t + 2f)\). It is easy to show that the extreme in this interval is a local maximum. The optimal value of \( as \) is that value of \( as \) which maximizes Equation (16). Differentiating Equation (16) with respect to \( as \) yields the following first-order condition:

\[
2as^2 + Qas + Z = 0,
\]

where

\[
Q = -4s - 4t - 2f \quad \text{and} \quad Z = 2st + 5sf + 2tf - f^2.
\]

Solving Equation (17) for \( as \), with \( as \in (1/2f - t, 2t + 2f) \) yields

\[
as = s + t + \frac{1}{2}f - \sqrt{s^2 + t^2 + \frac{3}{4}f^2 + st - \frac{1}{2}sf}.
\]

To prove that the derived strategies for S, F, AS, and AF form an equilibrium, there remains to show that Equation (13) is satisfied. Equation (13) requires that \( as > 2f - t \). In Appendix A it is proved that Equation (18) implies that this inequality is always satisfied. Hence the derived strategies and implied posterior beliefs form a stable perfect Bayesian equilibrium of the game presented in Table 1. This game also has pooling equilibria, but these are not stable.
Let us summarize our results. The game discussed in the previous section has a unique stable equilibrium. In this equilibrium, F appoints an adviser whose predisposition coincides with that of himself. Player S appoints an adviser whose predisposition differs from that of himself. The project is undertaken if and only if both advisers send a positive message. The uniqueness of the equilibrium depends on the assumption that without information about $\epsilon$ and $\mu$ player F may make a wrong decision concerning the project. Only in the case that information about $\epsilon$ and $\mu$ is irrelevant for F, there exist stable noninformative equilibria.

4. The Role of Advisers in the Policy Decision Process

The analysis suggests that advisers play an important role in the final decision concerning public projects. In our model only if both advisers agree that a public project should be undertaken, the finance minister will not veto it. Judged by appearances, the policy decision process is dominated by the advisers, for their recommendations are decisive. However, appearances are deceptive. By appointing advisers, and hence choosing the predispositions of their advisers, the spending minister and the finance minister shape the behavior of their advisers. The finance minister appoints an adviser whose predisposition toward the project coincides with that of himself. As discussed in the previous section, by doing so the adviser takes the same decision the finance minister would make if he had observed the financial consequences of the project. However, Equation (18) implies that the spending minister does not appoint an adviser whose attitude toward the project conforms with that of himself. Because of this, the advice of AS may deviate from the advice S would have given if he were the adviser himself. To answer why, we examine how in an informative equilibrium $as$ is related to $f$ and $s$. In Appendix B the following proposition is proved:

**Proposition 1.** Equation (1) implies: $s > as > f$.

Proposition 1 states that the adviser of the spending minister is less biased toward undertaking the project than the spending minister, and more biased toward undertaking the project than the finance minister (and his adviser). What is the intuition behind this result? In our model the spending minister consults an expert for two reasons. First, like the finance minister, the spending minister wants to know whether he will benefit from undertaking the project. If this were the only reason for consulting an expert, the spending minister would appoint an adviser characterized by $as = s$. A positive message from such an adviser implies that the spending minister’s expected benefits from the project are higher than zero, and a negative message implies that the expected benefits from the project are lower than zero. Second, the spending minister consults an expert to convince the finance minister (and his adviser) of the desirability of the project. The less the adviser of the spending minister is biased toward the project, the more the finance minister is convinced of the desirability of the project (if the adviser sends $m_{AS} = Y_{AS}$). In fact, the most persuasive adviser is the one whose predisposition toward the project is equal to that of the finance minister.
The two reasons for consulting an expert are that in appointing an adviser, the spending minister faces a trade-off between acquiring information and providing information. Acquiring information requires that \( as \) is close to \( s \), but providing information requires that \( as \) is close to \( f \). Clearly the distinction between acquiring and providing information vanishes if the preferences of the spending minister and the finance minister are perfectly aligned: if \( s = f \), Equation (16) implies that \( as = f \).

5. Conclusions

In this article we have employed a game-theoretical model to examine how division of tasks in advising the government affect policy outcomes. Two features of our model pertain to division of tasks. First, policy decisions are made in two stages. In the first stage, a spending minister has to make a case for a project, and in the second stage the finance minister can veto a proposal for the project. Second, in our model, policy has two types of consequences. Both the spending minister and the finance minister can consult an adviser to obtain information about one type of policy consequence. Advisers are specialists. They only observe one type of consequence of a policy proposal.

Our model shows that the spending minister and the finance minister face different constraints when selecting an adviser. The chooser wants to obtain information about the consequences of policies. This gives him an incentive to consult an adviser whose predisposition toward policies coincides with that of himself. The spending minister wants the finance minister to support his proposal. This means that the proposer consults an adviser not only to obtain information about the consequences of the project, but also to provide information about the consequences of his proposal. This gives the proposer an incentive to choose an adviser whose predisposition toward the project lies between the predisposition of himself and that of the chooser.

Appendix A

We have to prove

\[ as > 2f - t. \]  \hspace{1cm} (A.1)

Equation (17) implies that Equation (A.1) requires

\[ V = 2(2f - t)^2 - (4s + 4t + 2f)(2f - t) + 2st + 5sf + 2tf - f^2 > 0. \]  \hspace{1cm} (A.2)

Rearranging Equation (A.2) yields

\[ V = 6t(t - f) + (6t - 3f)(s - f). \]  \hspace{1cm} (A.3)

Since by assumption \( t > f \) and \( s > f \), \( V > 0 \).

Appendix B

We have to prove

\[ as < s \]  \hspace{1cm} (B.1)

\[ as > f. \]  \hspace{1cm} (B.2)
First consider Equation (B.1). Equation (17) implies that Equation (B.1) requires that
\[ V = 2s^2 - (4s + 4t + 2f)s + 2st + 5sf + 2tf - f^2. \] (B.3)
After some rearrangements Equation (B.3) can be rewritten as
\[ V = 2t(f - t) + s(f - s) - (s - f)^2, \]
so that
\[ V = (2t + s)(f - s) + 2(s - t) - (s - f)^2. \] (B.4)
Because by assumption \( f < s \) and \( |s| < t \), \( V \) is negative. Next consider Equation (B.2). Equation (15) implies that Equation (B.2) requires that
\[ V = 2f^2 - (4s + 4t + 2f)f + 2st + 5sf + 2tf - f^2 > 0. \] (B.5)
Equation (B.5) can be written as
\[ V = (2t + f)(s - f). \] (B.6)
Since \( |f| < t \) and \( s > f \), \( V \) is positive.

References