TI 2004-065/1
Tinbergen Institute Discussion Paper

Politicians' Motivation, Political Culture, and Electoral Competition

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June 7, 2004

Abstract

We study electoral competition among politicians who are heterogeneous both in competence and in how much they care about (what they perceive as) the public interest relative to the private rents from being in office. We show that politicians' incentives to behave opportunistically increase with politicians' pay and with polarization of policy preferences. Moreover, politicians may have stronger incentives to behave opportunistically if other politicians are more likely to behave opportunistically. A political culture may therefore be self-reinforcing and multiple equilibria may arise. Lastly, we show that the mere probability that politicians care about the public interest enables opportunistic politicians to damage the reputation of their competitors. Consequently, efficient policies may be reversed.

Keywords: politicians' motivation, politicians' pay, political culture, electoral competition, coalition governments, reputation bashing.
JEL codes: D72, D78

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1 Introduction

When politicians talk about their motives for pursuing a political career, they rarely mention their narrow private interests such as desire for power, prestige, and remuneration. Instead, they refer to their devotion to the people, their commitment to the nation's interests, and a strong sense of mission and responsibility. History has learned that we should not always take these words for granted. Indeed, sceptics claim that politicians care about nothing but their narrow self-interest.

The importance of politicians' motivation for the quality of government decision making is self-evident. Since moral hazard and adverse selection problems in political decision making abound, politicians' motivation matters for policy choices. This is also clear from the literature on electoral competition: in many settings, policy choices depend on whether politicians care about the private rents from office (opportunism) or represent the interest of a particular group of voters (partisanship), see Persson and Tabellini (2000). Wittman (1983), Rogoff (1990), and Harrington (1993), among others, develop models where politicians care about both policy outcomes and holding office. Then, policy choices depend on how much politicians value policy relative to office. Empirical studies indicate that politicians are neither purely policy-oriented nor purely office-motivated, see Martin and Stevenson (2001)'s findings for European countries and Canada and those by Diermeier, Keane, and Merlo (2002) for the US.

The objective of this paper is to examine how politicians with *heterogeneous* motivations interact in electoral competition. We examine how beliefs about other politicians' motivation and behavior affect the incentive to behave opportunistically of a politician with a given motivation. We show that opportunistic behavior may breed opportunistic behavior. A political culture may therefore be self-reinforcing and multiple equilibria may arise. We also examine whether politicians who care a lot about the public interest may undo opportunistic actions by politicians who care little about the public interest. While this may be the case, the reverse may also be true: opportunistic politicians may oppose efficient policies so as to damage the reputation of their competitors in the elections.

Compared to the existing literature, our model has two important distinguishing features. First, we allow for heterogeneity in politicians' motivation as well as in politicians' competence. We define a politician's motivation as the extent to which he cares about (what he perceives as) the public in-

terest relative to the private rents from being in office. We assume that a politician's motivation, as well as his competence, are not observable. Voters and other politicians are informed, though, about the distribution of types from which politicians are drawn. Second, we consider a setting where, in each period, multiple politicians are involved in policy making and, hence, may face a trade-off between the public interest and their electoral prospects. More specifically, we develop a model with three political parties of which two form a coalition government. In each period, there are two politicians in office, each being responsible for a particular policy area. Together, these two features of the model (heterogeneity in motivation and multiple politicians with decision-making power) imply that a politician's behavior is not only dependent on his own motivation, but also on 'political culture,' that is, his beliefs about other politicians' motivation and behavior.

We consider a two-period model with elections at the end of the first period. We assume that each incumbent leader, before the elections, acquires an informational advantage over voters concerning the quality of the policies he has implemented. When a policy turned out to be a failure, reversing the policy before the next elections is in the best interest of voters. However, reversing a policy entails a reputational loss for the incumbent as voters update their belief about the incumbent's competence in designing good policies. Therefore, politicians who care little about the public interest have an incentive to stick to their policies so as to avoid erosion of their electoral prospects. Only those politicians who care sufficiently about the public interest are willing to admit a policy failure at the risk of losing the next election.[1]

Our analysis yields three main results. First, we show that politicians are less inclined to admit that a policy has failed when politicians' pay is higher. As holding office becomes more rewarding, a larger range of politicians are willing to compromise on voters' welfare so as to increase their chance of reelection. Likewise, politicians' incentive to behave opportunistically is stronger in more polarized political environments, that is, in environments where politicians differ more in their perception of the public interest. The reason is that in more polarized political environments, staying

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[1] By our two-period structure, voters optimally base their vote only on their beliefs about the politicians' competence, not about politicians' motivation. If politicians can stay in office for more than two periods, this need not hold. Then, opportunistic politicians may have an incentive to pretend a policy failure, so as to improve upon their reputation as a motivated politician.

in office is more rewarding as it keeps politicians with sharply different policy preferences out of power.

Second, we show that politicians have stronger incentives to behave opportunistically if they believe other politicians are more likely to behave opportunistically. The reason is that a given reputational loss has less of an effect on a politician's electoral prospects in an environment where other politicians are more likely to put at risk their reputation as well, than in an environment where politicians hardly ever admit policy failures. Consequently, a political culture may be self-reinforcing and multiple equilibria may arise. Moreover, the effects of higher politicians' pay and polarization on politicians' behavior are magnified by the strategic complementarity in politicians' opportunism.

Third, we show that opportunistic politicians may engage in reputation-bashing activities, implying that efficient policies may be reversed. When politicians have the opportunity to collect information about the effects of policies, politicians who care sufficiently about the public interest collect information about all policies that have been implemented, including those by other politicians, and make sure that inefficient policies are reversed. Politicians who care little about the public interest do not search for information. However, the fact that highly motivated politicians do, lends some credibility to a politician's claim that his competitor's policy is a failure. As a result, efficient policies may be reversed.

The paper is organized as follows. The next section gives a brief overview of earlier work and discusses how this paper relates to it. Section 3 presents the model. In Section 4, we solve the model and provide the comparative static results. Section 5 extends the model to allow for information collection by politicians. Section 6 concludes.

2 Related Literature

Building on the seminal works by Barro (1973) and Ferejohn (1986) on moral hazard in politics and by Rogoff and Sibert (1988) and Rogoff (1990) on adverse selection in politics, several recent papers have studied electoral competition when politicians are heterogeneous in motivation. In contrast to the present study, almost all of the existing papers consider heterogeneity

in politicians' willingness to accept bribes or to steal tax revenues.[2] Early papers include Besley and Case (1995), who study the role of yardstick competition in disciplining 'bad' policy makers, and Coate and Morris (1995), who show that 'bad' politicians may use inefficient 'sneaky' methods of redistribution towards special interests rather than cash payments, so as to avoid reputational damage. Recently, several papers have built on these contributions to examine the role of politicians' pay, term limits, and other features of the political process in disciplining and selecting politicians. An important element in these models is the assumption that is made about the information that voters have when they cast their ballot.

When voters can observe or infer bribe-taking by office-holders, they will punish politicians who have accepted bribes by voting them out of office. Paying politicians generously may then reduce politicians' incentive to take bribes as losing office becomes more costly (Besley, 2003).[3] Paying high wages, however, may impair the selection of politicians since bad politicians, by their good behavior, are reelected more often. This is important if politicians face no reelection constraint in a future period, for instance because of a term limit (Besley and Smart, 2003). High politicians' pay also adversely affects selection in our model, but the effect arises from politicians behaving worse rather than better in their first period when pay is higher. In our model, higher politicians' pay weakens politicians' incentive to admit a policy failure, which impairs voters' selection of competent politicians.

When voters can not infer whether an incumbent has accepted bribes, but they can observe the incumbent's policy choices, high politicians' pay may distort policy choices by 'good' politicians (that is, those who do not accept bribes). This may happen when some policy choices may be in the voters' interest but at the same time raise suspicion about the incumbent's integrity (Smart and Sturm, 2003). Our result on politicians' pay depends on

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[2]An exception is a recent paper by Callander (2004) who shows that politicians may be unwilling to commit to the median voter's position in the campaign stage, as this may be a bad signal about their motivation to perform well in office. Roemer (1999) studies electoral competition between political parties in proposing progressive income tax policies, assuming that each party consists of factions with different motivations which must reach agreement on the proposal.

[3]Relatedly, Dal Bó and Di Tella (2003) consider a model where honest politicians are threathened by 'nasty' interest groups. Increasing the rents from office may increase politicians' resistance against those pressures. These results relate to Becker and Stigler (1974) who argue that paying high wages to bureaucrats may help to fight corruption if the probability that corruption is discovered is strictly positive but smaller than one.

a similar information asymmetry between incumbents and voters about the efficacy of policies, but relies on politicians' concern about their reputation as a competent policy maker. Whereas in Smart and Sturm (2003) 'good' politicians compromise on voters' welfare so as to avoid being considered corrupt, in our paper politicians refuse to admit a policy failure so as to preserve their reputation as a competent policy maker.

Other papers have focused on citizen's incentives to run for office, building on the citizen-candidate model developed by Osborne and Slivinsky (1996) and Besley and Coate (1997). Caselli and Morelli (2004) show that incompetent and dishonest citizens have strongest incentive to pursue elective office. Incompetent citizens gain more from holding office as their market wage is lower (see also Messner and Polborn, 2003). Dishonest citizens gain more as office-holding enables them to collect bribes (see also Besley, 2003). Competent and honest citizens will only run for office when the reward is sufficiently high compared to their outside option.[4] Le Borgne and Lockwood (2002) endogenize candidate entry decisions in a Rogoff (1990)-style model and examine the implications for political budget cycles. In our paper, we abstract from the entry decision and, instead, focus on how heterogeneity in politicians' motivation among an existing pool of politicians affects politicians' incentives and their response to changes in politicians' pay and other features of the political process.

An important feature of our model is that we have more than one politician in each period who may face a trade-off between the public interest and electoral prospects. This feature is responsible for two of our three main results, namely that there is a strategic complementarity in politicians' opportunism, and that opportunistic politicians may oppose efficient policies so as to damage the reputation of competing politicians. Our result on strategic complementarity in politicians' opportunistic actions relates to (but is different from) studies showing strategic complementarity in accepting bribes and in rent-seeking, see e.g. Andvig and Moene (1990), Murphy et al. (1991), and Tirole (1996). Aidt (2003, Section 4) provides a survey of studies in this area. As Hillman and Swank (2000) note, political culture has not been a focus of attention for economists so far. Our result on reputation bashing by opportunistic politicians is related to models of promotion tournaments

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[4]Poutvaara and Takalo (2002) show that if campaigning produces a noisy signal of the ability of candidates, then increasing the compensation of elected officials may either increase or decrease the average candidate quality, depending on campaigning costs.

where contestants can engage in sabotage activities, see in particular Lazear (1989), and to papers on negative campaigning, see Skaperdas and Grofman (1995) and Konrad (2004).

Caillaud and Tirole (2002) study intra- and interparty competition between candidates who have the option to invest in designing a good policy platform. They show that *inter*party competition may give rise to strategic substitutability in platform investment, whereas *intra*party competition may give rise to strategic complementarity. An opportunity to let party's candidates share the rents from office may help to induce a candidate who designed a low-quality platform to stand down and to refrain from challenging the party's other candidate's good platform. We abstract from intraparty competition and exclusively focus on interparty competition. As in Caillaud and Tirole (2002), we do not allow for rent-sharing between candidates from different parties. An important difference between their paper and our paper is that politicians are purely office-motivated and homogeneous in their paper, whereas in our paper politicians care about both the public interest and office-holding, and are heterogeneous in competence and motivation. The heterogeneity of politicians gives rise to an adverse selection problem in addition to a moral hazard problem.

Our model builds on Dur (2001) who shows that policy makers may stick to inefficient policies for reputational reasons.[5] Compared to that paper, there are two main innovations. First, in this paper politicians differ not only in competence but also in their motivation and in their policy preferences. Second, we consider a multi-party system with coalition governments instead of a two-party system. Our model of coalition governments is deliberately kept simple so as to focus on the effects of heterogeneity in politicians' motivation. Richer models of coalition governments and elections include Austen-Smith and Banks (1988), Laver and Shepsle (1990), and Baron and Diermeier (2001).

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[5]Relatedly, in Canes-Wrone, Herron, and Shotts (2001), Chiu (2002), and Maskin and Tirole (2002), politicians who care a lot about reelection may have a reputational incentive to implement inefficient policies which are popular among the electorate and reject efficient policies which are unpopular. Majumdar and Mukand (2004) and Slantchev (2003) consider a similar agency problem as we do and extend it in other directions.

3   The Model

Consider a three party system. Each party I consists of a single leader i, where $i \in \{l, m, r\}$. There are two periods. In each period none of the parties constitutes a majority. We assume that in period 1 party L and M form a coalition government. Each leader i in office designs and implements one policy y_i.[6] Hence, policies y_l and y_m are implemented in period 1. To save space, we assume that policies last for only one period. Assuming that policies designed in period 1 may yield benefits or costs in period 2 as well does not affect our results qualitatively.

A policy is either good or bad, which is unknown before implementation. The expected quality of a policy depends on the competence of the leader who designed it. A leader is either competent or incompetent. A competent (incompetent) leader designs a good policy with probability p (q), where $1 \geq p > q \geq 0$. Neither voters nor the leader himself know whether he is competent.[7] The prior belief that a leader is competent is denoted by α, which is equal for all three leaders. To facilitate the presentation, denote by x the prior probability that a leader designs a good policy, where $x = [\alpha p + (1 - \alpha)q]$.

Leaders have different perceptions of the public interest: they value good policies designed by themselves more than good policies designed by others. More specifically, according to leader i, a good policy y_i raises social welfare with b_i^i, whereas a good policy y_j raises social welfare with b_i^j, where $j \neq i \in \{l, m, r\}$ and $b_i^i > b_i^j > 0$. Note that a leader cares equally about good policies designed by the two other leaders (e.g., $b_r^l = b_r^m$). This implies that a leader's policy preferences do not affect his chances to be part of a coalition government in period 2.[8] A bad policy decreases social welfare with cost

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[6]We abstract from leader's option not to implement a policy in period 1. Majumdar and Mukand (2004) have recently shown that reputational concerns may induce incumbents to be too conservative or too radical in policy implementation. See also Biglaiser and Mezzetti (1997), Glazer (2002), and Suurmond, Swank, and Visser (2004).

[7]Assuming that each leader knows his own ability does not affect the results qualitatively. A leader who knows that he is competent has a weaker incentive to reverse a bad policy than an incompetent leader since a competent leader faces a higher probability to design a good policy in period 2, making reelection more valuable.

[8]Relaxing this assumption may imply that a centrist party's leader has less of an incentive to behave opportunistically as, because of her policy preferences, she is much more certain to be in office again next period. A centrist party's internal control mechanism may be weaker, however, see Caillaud and Tirole (1999).

c, irrespective of which leader designed the bad policy. This cost c can be avoided by reversing the bad policy which, however, comes at a cost d. We assume that $c > d > 0$ such that reversing a bad policy is in the public interest.

Besides ideological differences, politicians also differ in their motivation. The utility function of leader i is:

$$U_i = \beta_i \left(V_{1i} + V_{2i} \right) + (e_1 + e_2)X,$$

where V_{ti} are the consequences of government policies for social welfare in period t as perceived by leader i, e_t is one if leader i is in office in period t and zero otherwise, X is the private rents from being in office in a period (which includes politicians' pay, perks, fame, and so on), and β_i measures how much leader i cares about (what he perceives as) the public interest relative to the private rents from office-holding.[9] We assume that a politician's motivation β_i is private knowledge. However, leaders as well as voters know that β_i is drawn from a uniform distribution on the interval $[0, \bar{\beta}]$. We study the implications of non-uniform distributions in Section 4.3.

After implementing y_i, leader i receives a signal which reveals the quality of y_i. Voters do not observe the content of the signal.[10] Furthermore, a leader can not credibly transmit the content of his signal to other leaders or to voters. In Section 5, we extend the analysis by giving leaders the opportunity to evaluate each other's policy.

After the signals have been received, the three leaders decide on the continuation of each policy through majority voting. The vote on y_l and the vote on y_m take place simultaneously. Citizens observe the leaders' votes.[11] Accordingly, voters update their beliefs about the competence of leader l and

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[9] An interesting extension is to allow for heterogeneity in X among politicians as well. This heterogeneity may stem from differences in tastes but also from differences in politicians' outside options. Professional politicians may have a particularly bad outside option compared to politicians who entered politics after a career elsewhere. Therefore, professional politicians may be most tempted to behave opportunistically and may be least trusted by voters. We leave this topic for future research.

[10] We consider an extreme case where a politician becomes completely informed whereas voters remain completely uninformed about the consequences of government policies. Results are qualitatively unaffected, though, when voters receive a noisy signal about the quality of policies, e.g. through the media. Crucial is that politicians are better informed than voters.

[11] We feel this is a plausible assumption as, usually, a Minister who admits that his policy is a failure makes headlines.

m using Bayes' rule. The voters' posterior belief about the competence of leader i is denoted by $\hat{\alpha}^v$, where superscript $v \in \{c, r\}$ refers to leader i's vote to continue (c) or reverse (r) his policy. As leaders may act opportunistically, the posterior beliefs of voters and leaders need not coincide. We denote by $\hat{\alpha}^p$ leader i's posterior belief about his own competence, where superscript $p \in \{g, b\}$ refers to the quality of the policy, good (g) or bad (b). For future reference, we denote by $\hat{x}^v = [\hat{\alpha}^v p + (1 - \hat{\alpha}^v)q]$ the voters' posterior belief about the probability that leader i designs a good policy if in office in period 2, given his voting decision in period 1. Similarly, we define $\hat{x}^p = [\hat{\alpha}^p p + (1 - \hat{\alpha}^p)q]$.

At the end of period 1 elections take place. We distinguish four groups of voters. Three equally-sized groups of voters are 'loyalists,' each attached to a different party. Loyalists have strong partisan preferences such that they always vote for their party's leader, irrespective of their belief about the competence of the leader.[12] A fourth group of voters, the swing voters, derive benefits from a good policy irrespective of which of the three leaders designed the policy, $b^i = b^j$. As each group of loyalists is of equal size, swing voters determine the winner of the elections (that is, the leader with the highest number of votes).

After the elections, two parties form a coalition government.[13] We assume that the winner of the elections has the right to form a government. As in period 1, the two coalition parties in period 2 both implement a policy. Next, signals are received and decisions are made on the continuation of the two new policies through majority voting.

Summarizing, the sequence of events is as follows:

1. Nature chooses ability and motivation of the leaders.

2. In period 1, leader l (m) designs and implements policy y_l (y_m).

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[12] Formally, this requires that $\hat{x}^r b_i^i - (1 - \hat{x}^r)d > \hat{x}^c b_i^j - (1 - \hat{x}^c)d$ for a loyal voter attached to party I. For sufficiently high values of b_i^i / b_i^j (sufficient polarization) this condition is satisfied.

[13] A two-party coalition government requires that the group of swing voters is smaller than 25% of the whole population. If the group of swing voters is larger, then the winner of the elections constitutes a majority. Further, we assume that any two parties prefer a minimum winning coalition over a grand coalition consisting of all three parties. This requires that $x b_i^j - (1 - x)d < 0$. Otherwise, electoral competition disappears. A three-party coalition government is more likely to arise in period 1 as this may create an opportunity to learn the opposition party leader's competence. We abstract from this.

3. Leader l (m) receives a private signal revealing the quality of y_l (y_m).

4. The three leaders vote simultaneously on the continuation of y_l and of y_m.

5. Leaders and voters observe each leader's votes and update their beliefs about the competence of leader l and m.

6. Elections take place.

7. The winner of the elections chooses a coalition party.

8. Incumbent leaders in period 2 design and implement one new policy.

9. Incumbents receive a private signal about the quality of their policies.

10. There is a simultaneous vote on the continuation of the policies.

11. The world ends.

A list of notation is provided at the end of the paper.

4 Equilibrium Political Culture

4.1 Equilibrium

In this section, we solve the model as presented in Section 3 for a Perfect Bayesian equilibrium. Hence, we identify conditions under which neither player has an incentive to deviate from his equilibrium strategy, given the equilibrium strategies and beliefs of the other players. We assume throughout that if, given the strategies of the other players, a player is indifferent, he votes as if he is pivotal. This assumption rules out equilibria where players' actions are never affected by information.[14] Players update their beliefs about leaders' competence according to Bayes' rule. The model is solved by backward induction.

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[14]For instance, there exists an equilibrium in which all leaders always vote against all policies, including their own. Similarly, since in the equilibria that we study none of the swing voters is pivotal, randomizing between the three leaders may be an equilibrium strategy for each swing voter.

Period 2 Two parties are in office in period 2, say party I and J. Leader i designs and implements y_i while leader j designs and implements y_j. After implementation, leader i (j) receives a fully informative and private signal revealing the quality of y_i (y_j). After the signals have been received, a decision is made on continuation of each policy by majority voting rule. Denote by Y_i (Y_j) a vote of a leader in favor of y_i (y_j) and by N_i (N_j) a vote against y_i (y_j). The following proposition describes a set of equilibrium voting strategies of the three leaders in period 2.

Proposition 1 *Consider the vote on y_i and on y_j in period 2. Suppose the opposition leader votes (N_i, N_j). Then leader i votes (Y_i, Y_j) if y_i is good and (N_i, Y_j) if y_i is bad. Similarly, leader j votes (Y_i, Y_j) if y_j is good and (Y_i, N_j) if y_j is bad.*

The strategies described in Proposition 1 imply that good policies are continued and bad policies are reversed in period 2. The intuition is simple. First note that electoral concerns do not play a role in period 2 as the world ends afterwards. As a consequence, each leader's objective is to maximize (what he perceives as) the public interest. In spite of the ideological differences, all three leaders prefer good policies to be continued, as $b_i^i > b_i^j > -d$, and bad policies to be reversed, as $c > d$. However, only the designer of a policy receives a signal revealing the policy's quality. Therefore, it is in everybody's interest that each incumbent is pivotal in the vote on the continuation of his own policy. Given that the opposition leader votes against both policies, leader i then optimally votes in favor of y_j and leader j votes in favor of y_i. Leader i and j vote in favor of their own policy only when it is good.[15]

Elections and government formation Recall that swing voters determine the winner of the elections. Swing voters value good policies designed by the three leaders equally, $b^i = b^j$. Since politicians do not behave opportunistically in period 2, swing voters vote for the leader they believe is most likely to be competent in designing policies in period 2. As leader r did not

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[15]Note that there exist different sets of equilibrium voting strategies, all yielding the same outcome. Suppose, for instance, that leader i always votes against y_j and leader j always votes against y_i. Then, the opposition party optimally votes in favor of both policies. Throughout the paper, we focus on equilibria where the opposition party votes against all government policies.

design a policy in period 1, voters' belief that leader r is competent remains α. Voters' posterior beliefs about the competence of leader l and m depend on the decisions made in period 1. Suppose, as in period 2, that a leader is decisive in the vote on continuation of his policy. We derive the condition under which this is the case in Lemma 1, see below. Voters know that leader l (m) is informed about the quality of y_l (y_m). Therefore, voters' posterior belief about the competence of leader l (m) depends on his vote to continue or reverse y_l (y_m).

Given that policies are either good or bad, leader l and m can follow two possible voting strategies regarding their own policy.[16] They can vote in favor of their own policy irrespective of the quality. We call this strategy the dishonest voting strategy. They can also vote in favor of their own policy if and only if it turned out to be a good policy. We call this strategy the honest voting strategy. Voters do not know which strategy the leader follows. As we will see below, whether a leader selects the dishonest or the honest strategy depends on how much he cares about the public interest relative to the private rents from office-holding, which is measured by β. Define w as the probability that a leader selects the dishonest voting strategy. We derive the equilibrium value of w later on, see equation (8).

If leader i votes for continuation of his policy y_i, then voters update their belief about the competence of leader i to:

$$\hat{\alpha}^c = \left[\frac{\alpha p + \alpha(1-p)w}{\alpha p + \alpha(1-p)w + (1-\alpha)q + (1-\alpha)(1-q)w} \right] > \alpha \text{ for any } w < 1.$$

(1)

When y_i is continued, either leader i played the honest voting strategy and y_i is a good policy, or leader i pursued the dishonest voting strategy. Note that given that there is a probability that a leader pursues the honest strategy ($w < 1$), continuation improves the leader's reputation of being a competent policy maker. When the probability that leaders play the dishonest strategy is higher, the reputational gains from continuing a policy are lower. In the extreme case in which all leaders are expected to act dishonestly in case of a policy failure, $w = 1$, continuation does not affect a leader's reputation, $\hat{\alpha}^c = \alpha$. When y_i is good, leader i updates the belief about his own competence

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[16]Voting against a good policy designed by oneself is never optimal, as will be shown below, see condition (3).

to:

$$\hat{\alpha}^g = \left[\frac{\alpha p}{\alpha p + (1-\alpha)q}\right] > \hat{\alpha}^c \text{ for any } w > 0.$$

Voters' and leader's posterior beliefs only coincide when all politicians are expected to play the honest voting strategy, $w = 0$.

If leader i votes for reversing his policy y_i, then voters' posterior belief about the competence of leader i is:

$$\hat{\alpha}^r = \left[\frac{\alpha(1-p)}{\alpha(1-p) + (1-\alpha)(1-q)}\right] < \alpha. \tag{2}$$

Voters know that a leader votes for reversing his policy if and only if the policy turned out to be bad. Reversing a policy therefore always decreases the probability that voters assign to leader i being competent. Note that, when a policy is reversed, voters' and leader's posterior beliefs always coincide $(\hat{\alpha}^r = \hat{\alpha}^b)$.

Equations (1) and (2) imply that, for any $w < 1$, voters believe that leader i designs a good policy in period 2 with higher probability if leader i voted for y_i in period 1, and with lower probability if he voted against y_i in period 1; $\hat{x}^c > x > \hat{x}^r$. Hence, if y_l (y_m) is continued and y_m (y_l) is reversed, then swing voters vote for leader l (m). If both y_l and y_m are continued, swing voters are indifferent between leader l and m, but prefer both of them to leader r. We assume that, in that case, with equal probability either leader l or leader m wins the elections.[17] Leader r wins the elections if both policies implemented in period 1 are reversed, since $x > \hat{x}^r$.

After the elections, the winner forms a new coalition government. Recall that a two-party government is preferred to a three-party government by any coalition party. Since the winner does not prefer one party's policy over the other's for ideological reasons, he chooses the party with the leader he believes is most likely to be competent. This way, the winner maximizes the probability of obtaining benefit b_i^j and minimizes the probability of incurring the cost d. Hence, the coalition party that is most likely to be competent is selected. As a consequence, a leader i who continues y_i is certain to be

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[17]When $w = 1$, policies are always continued in period 1 and the posterior probability equals the prior probability $\hat{\alpha}^c = \alpha$, see (1). Hence, voters are indifferent between the opposition leader and the incumbents. To save space, we assume that, in that case, an incumbent wins the elections, and both incumbents remain in office. A reason for this could be that leader r's prior probability of being competent is slightly lower than α, which may also motivate why leaders l and m are in office in period 1.

reelected: Either he wins the elections or he is selected by leader j when leader j won the elections, since $\hat{x}^c > x$.[18] Note that the winner of the elections has the same beliefs about the other leaders' competence as voters. This will be different in Section 5 where leaders can collect information about the effects of each other's policies.

Period 1 In period 1 policies y_l and y_m are implemented. After implementation, leader l receives a signal revealing the quality of y_l whereas leader m receives a signal revealing the quality of y_m. Through majority voting, a decision is made on continuation of each policy. Since leaders are uniformed about the quality of each other's policy, leader i's vote on leader j's policy does not affect voters' beliefs about leader i's or leader j's competence. Hence, leaders base their vote on each other's policy only on the expected effects on the public interest, as in period 2. Lemma 1 shows under which condition coalition parties vote in favor of each other's policies in period 1.

Lemma 1 *Consider the vote on y_l and on y_m in period 1. Suppose that leader r votes (N_l, N_m). Then, leader l votes Y_m and leader m votes Y_l if*
$$x(b_i^j + d) - (1 - x)w(c - d) \geq 0.$$

When a policy, although designed by the other leader, is good, supporting the policy increases leader i's utility from policies with $b_i^j + d$. However, supporting the other's policy also gives an opportunistic leader j the opportunity to continue a bad policy, resulting in net cost $c - d$. When w increases, the condition in Lemma 1 becomes more restrictive. When politicians have little trust in one another (a high level of w), the expected benefits from a policy designed by an other leader may be negative, as policies are unlikely to be reversed when they turn out to be bad. Then, a complete political deadlock may result. When policies lack political support after implementation, neither leader has an incentive to design and implement a policy as it will only bring cost d. We restrict our analysis to cases where Lemma 1 holds. Leader l (m) then is decisive in the vote on continuation of y_l (y_m).

Consider the voting decision of leader l on y_l. The voting decision of leader m on y_m is analogous. Suppose leader l receives a signal that y_l is a

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[18]Assuming that the prior belief about the competence of the opposition leader is drawn from a distribution makes the impact of policy continuation on reelection chances more smooth. Then a leader faces a higher probability of reelection if he continues his policy, as in Dur (2001).

good policy. Leader l updates his belief about his competence to $\hat{\alpha}^g$, implying a probability $\hat{x}^g$ to design a good policy in the next period. Leader l decides to vote in favor of y_l if:

$$\beta_l \left\{ \begin{array}{c} b_l^l + [x + (1-x)w] \left[\hat{x}^g b_l^l + \hat{x}^c b_l^m - (1 - \hat{x}^g)d - (1 - \hat{x}^c)d \right] \\ + (1-x)(1-w) \left[\hat{x}^g b_l^l + x b_l^r - (1 - \hat{x}^g)d - (1 - x)d \right] \end{array} \right\} + X \geq$$

$$\beta_l \left\{ \begin{array}{c} -d + [x + (1-x)w] \left[\hat{x}^c b_l^m + x b_l^r - (1 - \hat{x}^c)d - (1 - x)d \right] \\ + (1-x)(1-w) \left[\frac{1}{2} \hat{x}^g b_l^l + \frac{1}{2} \hat{x}^r b_l^m + x b_l^r - (1 - x)d - (1 - \frac{1}{2}\hat{x}^g - \frac{1}{2}\hat{x}^r)d \right] \end{array} \right\}$$

$$+ \frac{1}{2}(1-x)(1-w)X,$$

which reduces to:

$$\beta_l \left\{ \begin{array}{c} b_l^l + d + [x + (1-x)w] \left[\hat{x}^g b_l^l - x b_l^r + (\hat{x}^g - x)d \right] \\ + (1-x)(1-w)\frac{1}{2} \left[\hat{x}^g b_l^l - \hat{x}^r b_l^m + (\hat{x}^g - \hat{x}^r)d \right] \end{array} \right\}$$

$$+ \left[1 - \frac{1}{2}(1-x)(1-w) \right] X \geq 0. \tag{3}$$

Condition (3) always holds. Voting in favor of a good policy is beneficial for three reasons. First, the utility from policies in period 1 increases as voting in favor of y_l provides the benefits b_l^l and prevents the cost of reversing d. Second, expected utility from policies in period 2 also increases. Voting in favor of y_l ensures that leader l is in office in period 2. As he is as least as likely as any other leader to design a good policy in period 2, $\hat{x}^g > x > \hat{x}^r$, and since he values his own policies more than those designed by others ($b_l^l > b_l^m = b_l^r$), voting in favor of y_l always increases his expected utility from policies in period 2. Third, continuing y_l ensures that leader l receives the private rents from office, X, in period 2.

Suppose leader l receives a signal that y_l is bad. Leader l updates his belief about his competence to $\hat{\alpha}^b$, implying a probability $\hat{x}^b = \hat{x}^r$ to design a good policy in the next period. Leader l votes against y_l if:

$$\beta_l \left\{ \begin{array}{c} -d + [x + (1-x)w] \left[x b_l^r + \hat{x}^c b_l^m - (1 - x)d - (1 - \hat{x}^c)d \right] \\ + (1-x)(1-w) \left[x b_l^r + \frac{1}{2}\hat{x}^r b_l^m + \frac{1}{2}\hat{x}^r b_l^l - (1 - x)d - (1 - \hat{x}^r)d \right] \end{array} \right\}$$

$$+ \frac{1}{2}(1-x)(1-w)X \geq$$

$$\beta_l \left\{ \begin{array}{c} -c + [x + (1-x)w] \left[\hat{x}^r b_l^l + \hat{x}^c b_l^m - (1 - \hat{x}^r)d - (1 - \hat{x}^c)d \right] \\ + (1-x)(1-w) \left[x b_l^r + \hat{x}^r b_l^l - (1 - x)d - (1 - \hat{x}^r)d \right] \end{array} \right\} + X,$$

which reduces to:

$$\beta_l \left\{ (c-d) - [x+(1-x)w]\left[\hat{x}^r b_l^l - x b_l^r - (x-\hat{x}^r)d\right] - (1-x)(1-w)\frac{1}{2}\hat{x}^r(b_l^l - b_l^m) \right\}$$

$$- \left[1 - \frac{1}{2}(1-x)(1-w)\right] X \geq 0. \tag{4}$$

In contrast to condition (3), condition (4) does not always hold. Let us discuss condition (4) in detail.

First, reversing y_l increases utility in period 1 as the cost of continuing a bad policy are higher than the cost of reversing the policy ($c > d$), see the first term in (4).

Second, reversing y_l decreases leader l's probability of reelection and, therefore, the policies implemented in period 2. The decrease in leader l's reelection chances depend on the vote of leader m. With probability $[x+(1-x)w]$ leader m votes in favor of y_m. Reversing y_l then implies that party R and M are in office in period 2 rather than party L and M. This has two effects on leader l's utility from policies in period 2. First, the probability that policies designed in period 2 are good increases as leader r is more likely to be competent than leader l ($x > \hat{x}^r$). As a result, the probability that policies are reversed decreases, which saves cost d. Second, however, leader l cares more about a policy designed by himself than about a policy designed by leader r, $b_l^l > b_l^r$. This second effect always dominates the first. This follows from our assumption that $xb_i^j - (1-x)d < 0$, which guarantees that any coalition party prefers a two-party coalition to a grand coalition.[19] Hence, reversing policy y_l in period 1 entails a cost for leader l in case leader m decides to vote in favor of his own policy. With probability $(1-x)(1-w)$, leader m reverses y_m. As a result, the opposition party is in office for sure. If leader l reverses his policy as well, leader l and m are in office again each with probability $\frac{1}{2}$, whereas leader l is certain to be in office again if he continues his policy. Reversing y_l does not affect the probability that policies are reversed in period 2, as leader l and m are equally likely to be competent. However, leader l values his own policies more than those designed by leader m. Therefore, reversing y_l reduces the expected benefits

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[19]Note that we have implicitly assumed that $\hat{x}^r b_l^l - (1-\hat{x}^r)d > 0$. If this does not hold, leader l may accept office, but he will not design and implement a policy in period 2, which yields a higher utility than the expected utility from a policy designed by leader r in period 2.

from policies in period 2. Concluding, irrespective of leader m's vote on his own policy, leader l's expected utility from policies implemented in period 2 decreases when he reverses his policy implemented in period 1.

Third, as reversing y_l reduces leader l's chance of reelection, the expected private rents from office decrease.

In sum, when deciding whether to reverse or continue bad policy y_i, leader i faces a trade-off between the increase in voters' welfare in period 1 on the one hand, and decreases in expected private rents from office and in voters' welfare in period 2 on the other hand. Note that even when $X = 0$ (no private rents from office) politicians may be tempted to continue bad policies. This may happen when there is strong polarization (high b_i^i compared to b_i^j), such that the first term in (4) is negative. Then, all politicians, regardless of their motivation β_i, behave opportunistically so as to keep out of office rival politicians with very different policy preferences. In what follows, we focus on equilibria where the private rents from office as well as policy preferences play a role. So, we assume that the first term in (4) is positive. Then, condition (4) only holds if leader i cares sufficiently about the public interest relative to the private rents from holding office, measured by β_i.

There exists a level of β_i for which condition (4) holds exactly. Denote this threshold level by $\hat{\beta}$. Leaders with β_i above $\hat{\beta}$ reverse a bad policy y_i, while leaders with β_i below $\hat{\beta}$ stick to inefficient policies. Thus, $\hat{\beta}$ can be described as the minimum amount of public spiritedness a politician must have so as to resist the temptation to behave opportunistically. Using (4), we can write $\hat{\beta}$ as:

$$\hat{\beta} = \frac{\left[1 - \frac{1}{2}(1-x)(1-w)\right] X}{(c-d) - [x + (1-x)w]\left[\hat{x}^r b_i^i - x b_i^j - (x - \hat{x}^r)d\right] - (1-x)(1-w)\frac{1}{2}\hat{x}^r (b_i^i - b_i^j)} \tag{5}$$

Equation (5) shows how $\hat{\beta}$ depends on the exogenous variables and on w, the probability that other politicians behave opportunistically. Hence, there is strategic interdependence between politicians' actions.

Before we derive the equilibrium value of w, it is useful to first consider the partial effect of w on $\hat{\beta}$, that is, how a politician's incentive to behave opportunistically is affected by the probability that other politicians behave

opportunistically. Straightforward algebra yields:[20]

$$\frac{\partial \hat{\beta}}{\partial w} = \frac{\frac{1}{2}(1-x)\left[(c-d)-(x-\hat{x}^r)\left(b_i^j+d\right)\right]X}{\left\{(c-d)-[x+(1-x)w]\left[\hat{x}^r b_i^i - x b_i^j - (x-\hat{x}^r)d\right]-(1-x)(1-w)\frac{1}{2}\hat{x}^r(b_i^i-b_i^j)\right\}^2}$$

$$(6)$$

An increase in w affects the incentive to reverse a bad policy, and thus $\hat{\beta}$, for two reasons.

First, an increase in w makes it less likely that after admitting a policy failure incumbent i enjoys the private rents from office in period 2, see also the numerator in equation (5). The reason is that, after admitting a policy failure, incumbent i faces a positive probability of being in office again *only* if the other incumbent *also* admits a policy failure. This is less likely when w is higher. Hence, an increase in w strengthens incumbents' incentive to continue a bad policy, implying an increase in $\hat{\beta}$.

Second, an increase in w also affects the incumbent's incentive to reverse a bad policy through its effect on utility from policies implemented in period 2, see also the denominator in (5). This effect appears to be ambiguous. Clearly, a sufficient condition for $\partial \hat{\beta}/\partial w > 0$ is that the denominator of (5) decreases with w. This requires that:

$$\left[\hat{x}^r b_i^i - x b_i^j - (x-\hat{x}^r)d\right] > \frac{1}{2}\hat{x}^r(b_i^i - b_i^j), \qquad (7)$$

which says that reversing a policy must have a stronger effect on incumbent i's utility from policies in period 2 when the other incumbent continues his policy than when the other incumbent reverses his policy as well, see the discussion of condition (4) above. Since, after reversing his policy, incumbent i is always out of office when the other incumbent continues his policy, while he faces probability $1/2$ to remain in office when the other incumbent reverses his policy, condition (7) seems a plausible condition. Henceforth, we focus on equilibria where this condition holds. However, when there is little polarization in policy preferences (low b_i^i relative to b_i^j), or when the cost of reversing a policy d is large, it might be that the incumbent's incentive to admit a policy failure is weaker rather than stronger when the probability that other politicians admit policy failures is higher. Then, there is strategic substitutability in politicians' opportunism.

So far, we have treated the probability that the other leader selects the dishonest voting strategy, w, as exogenous. Since β_i is drawn from a uniform

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[20]Recall that $\hat{x}^r$ does not depend on w, see (2).

distribution $[0, \bar{\beta}]$, it follows that:

$$w = \frac{\hat{\beta}}{\bar{\beta}}, \tag{8}$$

where $\hat{\beta}$ is defined by (5). Equations (5) and (8) describe the equilibrium values of w and $\hat{\beta}$ in terms of the exogenous variables. We assume that $\bar{\beta}$ is sufficiently high such that an interior solution exists, implying $0 \leq \hat{\beta} \leq \bar{\beta}$ and $0 \leq w \leq 1$. Since equation (5) is nonlinear, there need not be a unique equilibrium. In the Appendix, we show that if $\partial\hat{\beta}/\partial w > 0$, then a unique equilibrium is guaranteed. In Section 4.3, we discuss the possibility of multiple equilibria, which may arise when the distribution of politicians' motivation is non-uniform or when $\bar{\beta}$ is low.

Proposition 2 summarizes the equilibrium voting strategies of leader l and m.

Proposition 2 *Consider the vote on y_l and on y_m in period 1. Suppose that the condition in Lemma 1 holds. Then leader l votes Y_l when y_l is good and N_l when y_l is bad if $\beta_l \geq \hat{\beta}$. If $\beta_l < \hat{\beta}$, then leader l votes Y_l irrespective of the quality of y_l. Similarly, leader m votes Y_m when y_m is good and N_m when y_m is bad if $\beta_m \geq \hat{\beta}$. If $\beta_m < \hat{\beta}$ then leader m votes Y_m irrespective of the quality of y_m.*

Proposition 2 shows that politicians who care little about the public interest relative to the private rents from office-holding continue bad policies so as to preserve their reputation as a competent policy maker and, hence, avoid erosion of their electoral prospects. Only politicians who care sufficiently about the public interest are willing to admit a policy failure at the risk of losing the next election.

4.2 Comparative Statics

In this subsection, we examine how the exogenous variables affect the threshold level $\hat{\beta}$ and, hence, the proportion w of politicians who follow the dishonest strategy. As we have seen, $\hat{\beta}$ does not only depend on the exogenous variables, but also on w, which in turn is dependent on $\hat{\beta}$. Therefore, a change in any of the exogenous variables affects $\hat{\beta}$ directly and indirectly through its effect on w.

Consider the effect of an exogenous variable, say z, on w. Using (8), it follows that by definition:

$$\frac{dw}{dz} = (1/\bar{\beta})\frac{d\hat{\beta}}{dz}. \tag{9}$$

That is, in equilibrium, it must hold that the change in w as a result of a change in exogenous variable z equals $1/\bar{\beta}$ times the change in the equilibrium value of $\hat{\beta}$. Using (5), the effect of a change in z on the equilibrium value of $\hat{\beta}$ is given by:

$$\frac{d\hat{\beta}}{dz} = \frac{\partial\hat{\beta}}{\partial z} + \frac{\partial\hat{\beta}}{\partial w}\frac{dw}{dz}, \tag{10}$$

where $\partial\hat{\beta}/\partial w$ is given by (6). Combining (9) and (10) yields after some rewriting:

$$\frac{d\hat{\beta}}{dz} = \frac{\partial\hat{\beta}}{\partial z}\left[\frac{1}{1 - (1/\bar{\beta})\frac{\partial\hat{\beta}}{\partial w}}\right]. \tag{11}$$

The total effect of an increase in an exogenous variable on $\hat{\beta}$ is the product of a direct effect, $\partial\hat{\beta}/\partial z$, and a 'multiplier,' which stems from the strategic interdependence between politicians. Note that, given that we consider an interior solution (sufficiently high $\bar{\beta}$), the multiplier is always positive because $\partial\hat{\beta}/\partial w$ does not exceed $\bar{\beta}$. The multiplier magnifies the direct effect if:

$$\left[\frac{1}{1 - (1/\bar{\beta})\frac{\partial\hat{\beta}}{\partial w}}\right] > 1 \Longrightarrow \frac{\partial\hat{\beta}}{\partial w} > 0,$$

that is, if politicians' opportunistic actions are strategic complements. The reason is clear. When a change in z increases $\hat{\beta}$, a larger range of politicians act opportunistically, which induces even more politicians to act opportunistically. Hence, the effect of a change in any of the exogenous variables on politicians' incentive to behave opportunistically is magnified by strategic complementarity in politicians' opportunism.

Next consider the effects of the exogenous variables. Let us start with the effect of private rents from office. Using (5), it is easy to verify that $\partial\hat{\beta}/\partial X$ is positive. The intuition is simple. As holding office becomes more rewarding, a larger range of politicians are willing to compromise on voters' welfare so as to increase their chance of reelection. Likewise, politicians' incentive to behave opportunistically is stronger in more polarized political

environments, that is, when b_i^i increases or b_i^j decreases. The reason is that in more polarized political environments, staying in office is more rewarding as it keeps politicians with more differing policy preferences out of power. It is also clear from (5) that politicians have a stronger incentive to act opportunistically when the cost of continuing a bad policy, c, are lower, and when the cost of reversing a policy, d, are higher.

Lastly, consider the effect of a change in the composition of the pool of candidates from which politicians are drawn. Recall our assumption that a politician's β_i is drawn from a uniform distribution $[0, \bar{\beta}]$. A higher value of $\bar{\beta}$ implies that candidates, on average, care more about the public interest relative to the private rents from office-holding. From (5) we can see that this does not directly affect the threshold level $\hat{\beta}$. However, the threshold level is indirectly affected as the probability that a given politician acts opportunistically, w, changes. Substituting (5) into (8), and totally differentiating with respect to w and $\bar{\beta}$ yields after some rewriting using (8):

$$\frac{dw}{d\bar{\beta}} = -\left(\frac{\hat{\beta}}{\bar{\beta}^2}\right)\left[\frac{1}{1 - (1/\bar{\beta})\frac{\partial\hat{\beta}}{\partial w}}\right] < 0. \tag{12}$$

Hence, the direct effect of an increase in $\bar{\beta}$ on w, which is $-\hat{\beta}/\bar{\beta}^2$, see (8), is reinforced as politicians' incentive to act opportunistically decreases when other politicians are less likely to act opportunistically. From (5), it follows that the effect of $\bar{\beta}$ on the equilibrium value of $\hat{\beta}$ is given by:

$$\frac{d\hat{\beta}}{d\bar{\beta}} = \frac{\partial\hat{\beta}}{\partial w}\frac{dw}{d\bar{\beta}} < 0 \text{ if } \frac{\partial\hat{\beta}}{\partial w} > 0. \tag{13}$$

Hence, when, for some exogenous reason, the composition of the pool of candidates changes such that politicians on average care more about the public interest, a politician with a given β_i has a weaker incentive to act opportunistically. The reason is that a given reputational loss has less of an effect on a politician's electoral prospects in an environment where other politicians are more likely to put at risk their reputation as well, than in an environment where politicians hardly ever admit policy failures. Similarly, entry of politicians who care little about the public interest gives current politicians with a given motivation a stronger incentive to behave opportunistically. A political culture may therefore be self-reinforcing.

4.3 Multiple Equilibria

So far, we focused on situations where a unique equilibrium arises. If $\bar{\beta}$ is not sufficiently high, or if we relax the assumption that politicians' motivations follow a uniform distribution, then multiple equilibria may arise. This is illustrated with the help of Figure 1.
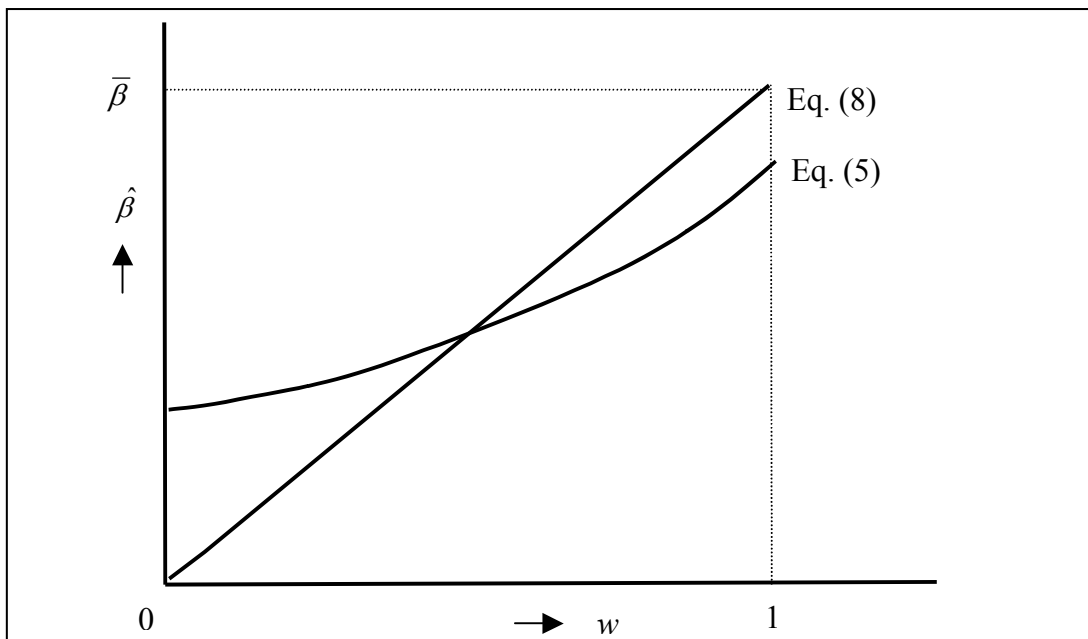

Figure 1

    The convex curve starting at $w = 0$, $\hat{\beta} > 0$, represents equation (5), describing the relation between the minimum amount of public spiritedness a politician must have so as to resist the temptation to behave opportunistically, $\hat{\beta}$, and the proportion of politicians expected to behave opportunistically, w. The curve is upward sloping if there is strategic complementarity in politicians' opportunism. In the Appendix we have shown that if the curve is upward sloping, then it is always convex. Given that there are private rents from office, $X > 0$, the curve starts at $w = 0$, $\hat{\beta} > 0$, that is, even when the probability that other leaders behave opportunistically would be zero, some leaders have an incentive to do so, namely the leaders with very low β. The straight line represents equation (8), describing the uniform distribution of politicians' motivations.

Clearly, with a uniform distribution, and sufficiently high maximum motivation $\bar{\beta}$ such that when $w = 1$ equation (5) implies $\hat{\beta} < \bar{\beta}$, there is a unique equilibrium, as depicted in Figure 1 and proven in the Appendix. Reducing the value of $\bar{\beta}$ rotates the straight line clockwise around the origin. For sufficiently low values of $\bar{\beta}$, multiple equilibria arise: one unstable equilibrium, and two stable equilibria, of which one with $w < 1$, and the other with $w = 1$. When $\bar{\beta}$ becomes very low, we have a unique equilibrium again, the one where all politicians behave opportunistically, $w = 1$.

When the distribution of politicians' motivations is non-uniform, equation (8) becomes nonlinear and is no longer represented by a straight line in Figure 1. It is easy to imagine distribution functions which, together with equation (5), imply multiple equilibria. For instance, when relatively few politicians have 'extreme' motivations (β close to zero and β close to $\bar{\beta}$), equation (5) could be represented in Figure 1 by a curve which is concave for low values of w and convex for high values of w. Clearly, multiple equilibria may then arise.

5   Reputation Bashing

In the previous section, we have shown that politicians who do not care sufficiently about the public interest continue bad policies so as to preserve their reputation as a competent policy maker. This section extends the analysis by allowing politicians to evaluate each other's policy. As we will see, this may avoid continuation of bad policies, since politicians who care a lot about the public interest search for information and withdraw support for a policy when they find out that it is bad. However, the opportunity to learn about effects of a competing politician's policy may enable politicians who care little about the public interest to damage the reputation of their coalition partner. Efficient policies may therefore be reversed.

As in Section 4, we assume that a leader becomes fully informed about the quality of his own policy, and that he can not credibly transmit this information to other leaders or voters. At a non-verifiable private cost K, a leader also receives a fully informative, non-transmittable signal about the quality of the other leader's policy. The opposition leader and the voters do not search for information.[21]

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[21] Allowing the opposition party to examine the effects of the two government policies may lead to free rider problems in information collection. Since opposition parties usually

The timing of the events is as follows. In period 1, incumbent leader i and j receive a private signal revealing the quality of their own policy. Subsequently, each leader in office decides whether or not to evaluate the policy designed by the other leader in office at non-verifiable private cost K. Next, each leader in office decides whether to vote in favor of his own policy and whether to support the other leader's policy. Each leader thus selects one out of four possible voting pairs, taking into account the information about the quality of the two policies. The remainder of the game is the same as in the previous section, except that also in period 2, incumbent leaders choose whether or not to evaluate each other's policy.

The equilibrium voting strategy and the decision on whether or not to collect information of leader i depend again on his motivation, β_i. So far, we have assumed that β_i is distributed over the interval $[0, \bar{\beta}]$. For reasons of tractability and to facilitate the presentation of our argument, we simplify the model. In this section, we restrict the analysis to three types of politicians: pure opportunists, moderate opportunists, and pure idealists. Below we discuss the equilibrium strategies of the three types. A formal derivation is given in the Appendix. We start with a description of the three types.

First, a leader who cares very little about the public interest simply maximizes his probability of reelection. We call such a leader a 'pure opportunist.' Unsurprisingly, a pure opportunist never admits a policy failure and does not incur private cost K to become informed about the other leader's policy. However, a pure opportunist may vote against the policy of the other leader, even when the expected benefits of a policy are positive. The reason is that, in contrast to the previous section, voters take into account that a leader may be informed about the quality of the other leader's policy. Voting against a policy designed by the other leader may therefore increase one's own reelection chances. Below we show under which conditions this strategy is an equilibrium strategy.

Second, we introduce a 'moderate opportunist.' Like a pure opportunist, a moderate opportunist does not admit a policy failure and does not collect information about the other leader's policy. However, as he cares more about the public interest than a pure opportunist, he supports the coalition party's policy, as in the previous section.

have less access to the bureaucracy, it may be more difficult for them to become informed about the quality of government policies. Admittedly, however, it would be interesting to extend the model so as to give the opposition party a more active role in the game. We leave that for future research.

Third, a leader who cares strongly about the public interest, a 'pure idealist,' maximizes what he perceives as the public interest. Therefore, he always admits a policy failure. Moreover, he evaluates the other leader's policy and makes sure that bad policies are reversed.

We assume that a leader is a pure opportunist with probability w_1, a moderate opportunist with probability w_2, and with the remaining probability a pure idealist. The probabilities w_1 and w_2 are exogenous. In the Appendix, we derive the range of values that β can take for each type, given the equilibrium strategies of the other types.[22]

Period 2 In period 2, the results are the same as in Section 4: good policies are continued, whereas bad policies are reversed. As there are no reelection concerns in period 2, any type of leader admits a policy failure. Consequently, there is no use in evaluating each other's policy in period 2.

Elections and government formation Since there is no moral hazard problem in period 2, swing voters base their vote only on their beliefs about the competence of the leaders. The following Lemma describes the voting decision of the swing voters.

Lemma 2 *Suppose leader i and j are in office in period 1. Then:*

a) *The opposition leader wins the elections if leader i or if leader j, or both, vote (N_i, N_j).*

b) *Leader i wins the elections if leader j votes (Y_i, N_j).*

c) *With equal probability, leader i or leader j wins the elections if both leader i and j vote (Y_i, Y_j) and if leader i votes (Y_i, N_j) and leader j votes (N_i, Y_j).*

d) *Lastly, when leader i votes (Y_i, N_j) and leader j votes (Y_i, Y_j), leader i wins the elections if the following condition holds:*

$$w_2(1 - w_2)x\left(\hat{x}^g - \hat{x}_i + x - \hat{x}^r\right) \geq$$
$$w_2 w_1\left[2x(\hat{x}^g - \hat{x}_i + x - \hat{x}^r) + \hat{x}_i - x\right] + w_1 w_1 x\left(x - \hat{x}^r\right),$$

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[22]A more extensive treatment would allow for other types as well. For instance, there may exist a type who only admits a policy failure after finding out that the other leader's policy is also a failure. We conjecture that our main result in this section is not affected by allowing for more types as long as the group of pure idealists is sufficiently large.

where $\hat{x}_i \in (x, \hat{x}^g)$. If this condition does not hold, an equilibrium in mixed strategies exists.

Proof. See the Appendix. ∎

Let us discuss the four cases described by Lemma 2 in detail. In case *a)* and in case *b)*, at least one leader votes against his own policy. As only a pure idealist admits a policy failure, this vote reveals his type. Recall that a pure idealist is informed about the quality of both policies and votes in favor of a policy only if it is good. Hence, swing voters learn the quality of both policies and select the opposition leader in case *a)* and leader i in case *b)*. In case *a)*, the opposition leader forms a coalition government with leader i or j with equal probability, since leader i and j are equally likely to be competent. In case *b)*, leader i forms a coalition with the opposition party, since $x > \hat{x}^r$.

Swing voters can not discriminate between the two leaders in office when both leaders vote in favor of both policies, and when both leaders vote in favor of their own policy and against the other policy (case *c)*). Selecting the opposition party is then never optimal as the opposition leader can also not discriminate between leader i and j. If the opposition leader wins the elections, he randomizes between leader i and j when he selects the coalition partner for period 2. Voters can improve upon the selection of politicians by electing either leader i or j. The reason is that leader i and/or j may be an idealist and, hence, may be informed about the quality of policies in period 1. Then, leader i or j is better able to select a competent coalition partner than the opposition leader.[23]

Finally, in case *d)* one leader in office votes in favor of both policies whereas the other leader in office votes in favor of his own policy and against the other policy. The latter leader is either a pure idealist or a pure opportunist. A pure idealist i votes against y_j only if y_j is bad. On the contrary, a pure opportunist i may only vote against y_j so as to increase his reelection chances. Voters prefer leader i to win the elections only if leader i is sufficiently more likely to be an informed pure idealist than to be a pure

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[23]In case *c)*, the coalition in period 2 consists of leader i and j if both leaders have voted (Y_i, Y_j). If leader i voted (Y_i, N_j) and leader j voted (N_i, Y_j), the winner of the elections (i or j) forms a coalition with the opposition party if the winner is a pure idealist (and hence knows that the other leader did not admit a policy failure in period 1). If the winner is a pure opportunist, the coalition in period 2 consists of leader i and j. The same holds in case *d)*.

opportunist. The condition in Lemma 2 therefore only holds if w_1 is not too large. The condition always hold if neither leader is a pure opportunist ($w_1 = 0$). Then leader i is a pure idealist for sure, whereas leader j is identified as a moderate opportunist. Swing voters trust a pure idealist and select leader i. On the contrary, the condition is violated if leader i is very likely to be a pure opportunist (w_1 close to 1). Then, only an equilibrium in mixed strategies exists, which will be discussed below.

Period 1 Let us now consider the implications of swing voters' behavior for the incumbents' decisions in period 1. In period 1, each coalition leader decides whether or not to become informed about the quality of the other leader's policy. Next, the leaders make a decision whether to vote in favor or against y_i and y_j. Proposition 3 summarizes the voting decision of each type of leader.

Proposition 3 *Suppose that the opposition leader votes (N_i, N_j). Suppose only pure idealists collect information about the quality of other leader's policy. Then, a pure idealist i votes Y_i if and only if y_i is good and votes Y_j if and only if y_j is good. A moderate opportunist i votes (Y_i, Y_j) irrespective of the quality of y_i. A pure opportunist i votes (Y_i, Y_j) if y_i is good, and votes (Y_i, N_j) if y_i is bad and the condition in Lemma 2 holds. When the condition in Lemma 2 does not hold, a pure opportunist i votes (Y_i, Y_j) if y_i is good and mixes between (Y_i, Y_j) and (Y_i, N_j) if y_i is bad.*

Above, we already discussed the voting behavior of pure idealists and of moderate opportunists. A pure opportunist i always votes for his own policy. His vote on the other leader's policy y_j depends on the quality of his own policy y_i. When his own policy turned out to be good, leader i votes for the other leader's policy. The reason is that, given that y_i is good, he stays in office for sure as he is either the winner of the elections or afterwards selected as a coalition party (see the proof of Lemma 2 in the Appendix). Hence, there is no reason to vote against y_j. However, if y_i is bad, leader i's reelection is uncertain. Voting against y_j then increases leader i's reelection chances as this harms the reputation of the other incumbent leader, given that the other leader votes in favor of his policy. When leader j votes (Y_i, Y_j), and the condition in Lemma 2 holds, a pure opportunist i is sure to win the elections when he votes (Y_i, N_j), see case *d)* in Lemma 2. When leader j votes (N_i, Y_j), a pure opportunist i wins the elections with probability $1/2$ when

he votes against y_j (see case c)) whereas he loses the elections when he votes in favor of the other leader's policy. Since pure opportunists maximize their probability of reelection, they vote against the other leader's policy when their own policy turned out to be bad. As a result, efficient policies may be reversed.

It is easy to show that an equilibrium in pure strategies does not exist if the condition in Lemma 2 is violated. Suppose swing voters believe that a pure opportunist i always votes (Y_i, N_j) when his policy is bad. Then, a leader j who votes (Y_i, Y_j) wins the elections if leader i votes (Y_i, N_j), given that the condition in Lemma 2 is violated. Clearly, given the swing voters' beliefs, pure opportunists have an incentive to vote (Y_i, Y_j). Suppose swing voters believe that a pure opportunist i always votes (Y_i, Y_j). Then, swing voters vote for leader i when he votes (Y_i, N_j) since only a pure idealist i may vote against y_j. Given these swing voters' beliefs, a pure opportunist i has an incentive to vote (Y_i, N_j) when his policy is bad. Clearly, only an equilibrium in mixed strategies exists when the condition in Lemma 2 is violated. A pure opportunist votes with a probability against the other leader's policy when his own policy turned out to be bad. Swing voters select leader i with a probability when leader i votes (Y_i, N_j) and leader j votes (Y_i, Y_j), and select leader j with the remaining probability. Also in this case, efficient policies may be reversed.[24]

Decision to collect information   Lastly, consider leaders' incentive to collect information about the quality of each other's policy. For sufficiently high K, opportunists do not incur private cost K since they do not care sufficiently about the public interest. Consider pure idealists' incentive to collect information. Suppose leader i received a signal that his own policy y_i is good. Given the equilibrium voting strategies described above, leader i decides to evaluate y_j if:

$$\beta_i(1-x)\left[(w_1+w_2)(c-d)+(\frac{1}{2}w_1+w_2)\frac{1}{2}b_i^j(x-\hat{x}^r)\right] \geq K. \qquad (14)$$

Clearly, a pure idealist only has an incentive to collect information if there is a probability that the other leader does not admit a policy failure ($w_1 \neq 0$ and/or $w_2 \neq 0$). When the other leader does not admit a policy failure,

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[24]Likewise, only an equilibrium in mixed strategies exists when we consider a two-type model with only pure idealists and pure opportunists.

information collection raises utility from policies in period 1 with $c - d$, and improves upon the selection of competent politicians for office in period 2. These benefits and β_i must be sufficiently high to make up for the cost of information collection, K. When leader i received a signal that his own policy y_i is bad, he decides to evaluate y_j if:

$$\beta_i(1-x)\left[(w_1 + w_2)(c-d) + (w_1 + w_2)\frac{1}{2}\hat{x}^r(b_i^i - b_i^j)\right] + \frac{1}{2}(1-x)(w_1+w_2)X \geq K \tag{15}$$

Like above, evaluation may prevent the cost of continuing a bad policy. However, evaluation affects the selection of period 2 politicians differently than when y_i is good. As leader i is an idealist, he admits that y_i is bad. If he decides not to evaluate the other leader's policy, leader i faces a probability of reelection only if leader j is an idealist as well and y_j is bad. When leader j is an opportunist, leader i can increase his probability of reelection by finding out that y_j is bad. Then, leader i is reelected with probability $1/2$ since leader i and j look equally (in)competent in the eyes of the voters when leader i votes (N_i, N_j). Hence, when a pure idealist's policy turned out to be a failure, electoral concerns may give him an additional incentive to evaluate the other leader's policy, as it increases the probability of receiving the private rents from office X in period 2.

6 Concluding Remarks

We have studied politicians' incentive to behave opportunistically for reelection purposes. A key element of our model is that politicians do not only differ in competence and policy preferences, but also differ in their intrinsic motivation to improve upon the well-being of citizens. We have focused on an agency problem that arises when voters are less informed about the effects of policies than politicians are. We have shown that a higher reward from holding office and increased polarization in the policy positions strengthen the politicians' incentive to behave opportunistically. When several politicians are involved in decision making, these effects are magnified by a strategic complementarity in politicians' opportunism. We have shown that politicians have stronger incentives to behave opportunistically if they believe other politicians are more likely to behave opportunistically. A political culture may therefore be self-reinforcing and multiple equilibria may

arise. Lastly, we have shown that efficient policies may be reversed by opportunistic politicians so as to damage the reputation of their competitors. This may happen when politicians may be informed about the effects of each other's policies, and there is a sufficiently large number of publicly spirited politicians among the pool of candidates. Public spiritedness among politicians lends some credibility to a politician's claim that his competitor's policy is a failure. Opportunistic politicians take advantage of this and may vote against efficient policies designed by other politicians.

A particularly interesting extension of the model would be to endogenize politicians' participation decision, as in Caselli and Morelli (2004), Besley (2003), and other recent papers. While a higher reward from holding office may encourage people with high ability, or with high moral cost of taking bribes, to strive for a political career, it may also attract people who care most about the rewards from office, not about society. This, in turn, may strengthen the incentive of the politicians that already participated to behave opportunistically as a result of the strategic complementarity in politicians' opportunism. Other interesting extensions include examining endogenous removal of a party's leader by party members, the endogenous determination of politicians' pay, and information provision to voters by media and 'independent' agencies.

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Appendix

Proof of unique equilibrium if $\partial\hat{\beta}/\partial w > 0$

First note that equation (8) can be written as $\hat{\beta} = \bar{\beta}w$: a linear relation with slope $\bar{\beta}$, with minimum 0 when $w = 0$ and maximum $\bar{\beta}$ when $w = 1$. Next consider equation (5). Denote the function on the right-hand side by $\hat{\beta}(w)$. When $w = 0$, it follows that $\hat{\beta}(0) > 0$ given that $X > 0$. In the main text, we showed that, under a plausible condition, $\hat{\beta}'(w)$ is positive. To ensure that at least one interior solution exists, it is sufficient to assume that $\bar{\beta}$ is sufficiently high such that $\hat{\beta}(1) < \bar{\beta}$. The second derivative reads:

$$\frac{\partial^2\hat{\beta}}{\partial w^2} = \frac{\left(\begin{array}{c} (1-x)^2 \left\{ (c-d) + \left[\hat{x}^r b_i^i - x b_i^j - (x-\hat{x}^r)d\right] - \hat{x}^r(b_i^i - b_i^j) \right\} \times \\ \times \left\{ \left[\hat{x}^r b_i^i - x b_i^j - (x-\hat{x}^r)d\right] - \frac{1}{2}\hat{x}^r(b_i^i - b_i^j) \right\} X \end{array} \right)}{\left\{ (c-d) - [x + (1-x)w]\left[\hat{x}^r b_i^i - x b_i^j - (x-\hat{x}^r)d\right] - (1-x)(1-w)\frac{1}{2}\hat{x}^r(b_i^i - b_i^j) \right\}^3}$$

(16)

By comparing (6) with (16), and using (7), it is easy to verify that if $\hat{\beta}'(w) > 0$, then $\hat{\beta}''(w) > 0$ for any $0 \leq w \leq 1$. Hence, $\hat{\beta}(w)$ is convex and increasing. Since (8) is linear, it follows that a unique equilibrium is guaranteed, see also Figure 1 in Section 4.3.

Proof of Lemma 2: Swing voters strategies in the three-types case

The results of cases *a)*, *b)*, and *c)* follow directly from the intuition in the main text. Consider case *d)*. Suppose leader i votes (Y_i, N_j) and leader j votes (Y_i, Y_j). Given the equilibrium strategies of each type as defined in Proposition 3, voters infer three possible combinations of types; 1) leader i is a pure idealist, leader j is a moderate opportunist, 2) leader i is a pure opportunist, leader j is a moderate opportunist, and 3) both leader i and j are pure opportunists. Swing voters maximize the expected quality of period 2 policies. As discussed in the main text, selecting the opposition leader is not optimal as the opposition leader is equally informed as the voters about the competence of the incumbents. Swing voters vote for leader i rather than leader j if:

$$w_2(1 - w_1 - w_2)x(1 - x)(\hat{x}^g + x) + w_2 w_1(1 - x)(\hat{x}^r + x) + w_1 w_1 x(1 - x)(\hat{x}^r + \hat{x}^g) \geq$$
$$w_2(1 - w_1 - w_2)x(1 - x)(\hat{x}^r + \hat{x}_i) + w_2 w_1(1 - x)[x(\hat{x}^g + x) + (1 - x)(\hat{x}^r + \hat{x}_i)]$$
$$+ w_1 w_1 x(1 - x)(\hat{x}^g + x)$$

After some straightforward algebra, the condition in Lemma 2 follows from the above condition. Note that when leader j wins the elections and leader j is a moderate opportunist, then he selects leader i if y_j is bad and he select the opposition leader if y_j is good. In the latter case, leader j infers from the vote of leader i that leader i is a pure opportunist and y_i is bad. When y_j is bad, leader j can not fully infer the type of leader i. Either leader i is a pure idealist and y_i is good or he is pure opportunist and y_i is bad. The posterior probability that leader i designs a good policy in period 2 then is:

$$\hat{x}_i = \left[\frac{(1 - w_1 - w_2)x}{(1 - w_1 - w_2)x + w_1(1 - x)} \right] \hat{x}^g + \left[\frac{w_1(1 - x)}{(1 - w_1 - w_2)x + w_1(1 - x)} \right] \hat{x}^r$$

Note that $\hat{x}_i < \hat{x}^g$. If $(1 - w_1 - w_2)x(\hat{x}^g - x) > w_1(1 - x)(x - \hat{x}^r)$, then $\hat{x}_i > x$ and leader j selects leader i. Otherwise, leader j selects the opposition leader when his own policy is bad. Then, the condition in Lemma 2 becomes $w_2(1 - w_2)x(\hat{x}^g - \hat{x}^r) \geq w_2 w_1 2x(\hat{x}^g - \hat{x}^r) + w_1 w_1 x(x - \hat{x}^r)$. The intuition is the same as in the main text.

Definition of a pure idealist

A pure idealist evaluates y_j and votes in line with the public interest. This requires that condition (14) and (15) are satisfied, which is the case for

sufficiently high β_i. Given that a pure idealist i is informed about y_j he votes Y_i if and only if y_i is good and votes Y_j if and only if y_j is good.

Suppose y_i is good. Clearly, leader i votes Y_i. Furthermore, as leader i is in office for sure he votes Y_j if y_j is good and votes N_j if y_j is bad.

Suppose y_i is bad and y_j is good. Then a pure idealist prefers (N_i, Y_j) over all other voting strategies. First, a pure idealist i votes (N_i, Y_j) rather than (N_i, N_j) if:

$$\beta_i \left[(b_i^j + d) + \frac{1}{2}(\hat{x}^g b_i^j - \hat{x}^r b_i^i) + \frac{1}{2}(\hat{x}^g - \hat{x}^r) d \right] - (1 - w_1 - w_2)\frac{1}{2}X \geq 0$$

Second, a pure idealist i votes (N_i, Y_j) rather than (Y_i, N_j) if:

$$\beta_i \left\{ (b_i^j + d) + (w_2 + w_1)(c - d) - \left[w_1 + w_2 + \frac{1}{2}(1 - w_1 - w_2) \right] \left[(\hat{x}^r b_i^i - x b_i^j) - (x - \hat{x}^r) d \right] \right\}$$
$$- \left[w_1 + w_2 + \frac{1}{2}(1 - w_1 - w_2) \right] X \geq 0$$

Third, a pure idealist i votes (N_i, Y_j) rather than (Y_i, Y_j) if:

$$\beta_i \left\{ (1 - w_1 - w_2)(c - d) - (w_1 + w_2) \left[(\hat{x}^r b_i^i - x b_i^j) - (x - \hat{x}^r) d \right] \right\} - (w_1 + w_2)X \geq 0$$

All three conditions require that β_i is sufficiently high compared to the decrease in expected rents from office.

Suppose y_i is bad and y_j is bad. Then a pure idealist votes (N_i, N_j) rather than (Y_i, N_j) if:

$$\beta_i \left\{ w_2(c - d) - w_1\frac{1}{2} \left[(\hat{x}^r b_i^i - x b_i^j) - (x - \hat{x}^r) d \right] - w_2\frac{1}{2}(\hat{x}^r b_i^i - \hat{x}^r b_i^j) \right\} - \frac{1}{2}(w_1 + w_2)X \geq 0$$

which also hold if a pure idealist cares sufficiently about social welfare.

Definition of a moderate opportunist

We assumed that a moderate opportunist i decides to remain uninformed about the quality of y_j. When y_i is good this requires that the level of β_i is such that condition (14) is violated. When y_i is bad, a moderate opportunist decides to remain uninformed if:

$$\beta_i \left[(1 - x)(w_1 + w_2)(c - d) + (1 - x)(w_1\frac{1}{2} + w_2)b_i^j(x - \hat{x}^r) \right] < K.$$

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This requires that a moderate opportunist does not care too much about social welfare. Given that a moderate opportunist i decides to remain uninformed he votes (Y_i, Y_j). When y_i is good this is always an optimal strategy. The reason is that leader i is in office for sure if y_i is good and the expected benefits of policy y_j are positive (see Lemma 1).

Suppose y_i is bad. Then a moderate opportunist votes (Y_i, Y_j) rather than (N_i, N_j) if:

$$\beta_i \left\{ \begin{array}{c} x(b_i^j + d) - (1-x)(w_1 + w_2)(c - d) \\ +x\left[(\frac{1}{2}\hat{x}^g b_i^j + \frac{1}{2}\hat{x}^r b_i^i - x b_i^j) + (\frac{1}{2}\hat{x}^g + \frac{1}{2}\hat{x}^r - x)d\right] \\ +(1-x)(w_1 + w_2)\left[(\frac{1}{2}\hat{x}^r b_i^j + \frac{1}{2}\hat{x}^r b_i^i - x b_i^j) - (x - \hat{x}^r)d\right] \end{array} \right\}$$
$$+ \left[w_1 + w_2 - \frac{1}{2}x(1 - w_1 - w_2)\right]X \geq 0$$

If the term within the curly brackets is positive the condition always hold. Otherwise, β_i should not be too high.

Second, a moderate opportunist i votes (Y_i, Y_j) rather than (Y_i, N_j) if:

$$\beta_i \left\{ \left[x(b_i^j + d) - (1-x)(w_1 + w_2)(c - d)\right] - x(1 - w_1 - w_2)\frac{1}{2}\left[\left(\hat{x}^r b_i^i - x b_i^j\right) - (x - \hat{x}^r)d\right] \right\}$$
$$- \left[\frac{1}{2}(1 - w_1 - w_2)x\right]X \geq 0$$

which requires that a moderate opportunist cares sufficiently about the other policy and β_i is sufficiently high.

Finally, a moderate opportunist votes (Y_i, Y_j) rather than (N_i, Y_j) if:

$$\beta_i \left\{(w_1 x + w_2)(c - d) + (w_1 + w_2)\left[(x b_i^j - \hat{x}^r b_i^i) + (x - \hat{x}^r)d\right]\right\} - (w_1 + w_2)X \leq 0$$

which is satisfied if β_i is sufficiently low.

Definition of a pure opportunist

Recall that a pure opportunist i decides to remain uninformed about the quality of y_j. This requires that β_i is sufficiently low such that condition (14) is violated for a pure opportunist when y_i is good. When y_i is bad, a pure opportunist maximizes his probability of reelection by voting (Y_i, N_j) both if he is informed and if he is uninformed. As the voting strategies are the same, there is no reason to incur cost K to become informed.

Given that a pure opportunist remains uninformed, he votes (Y_i, Y_j) if y_i is good. This is optimal as leader i is in office for sure and the expected benefits of y_j are positive. Furthermore, a pure opportunist i votes (Y_i, N_j) if y_i is bad. A pure opportunist i votes (Y_i, N_j) rather than (N_i, N_j) if:

$$\beta_i \left\{ \begin{array}{c} -(w_2 + xw_1)(c-d) + x(1-w_1-w_2)\frac{1}{2}\left[\left(\hat{x}^g b_i^j - xb_i^j\right) + (\hat{x}^g - x)d\right] \\ +(w_1 + w_2)\left[\left(\frac{1}{2}\hat{x}^r b_i^j + \frac{1}{2}\hat{x}^r b_i^i - xb_i^j\right) - (x-\hat{x}^r)d\right] \end{array} \right\}$$
$$+ (w_1 + w_2) X \geq 0.$$

Second, a pure opportunist i votes (Y_i, N_j) rather than (Y_i, Y_j) if:

$$\beta_i \left\{ -x(b_i^j + d) + (1-x)(w_1 + w_2)(c-d) + x(1-w_1-w_2)\frac{1}{2}\left[\left(\hat{x}^r b_i^i - xb_i^j\right) - (x-\hat{x}^r)d\right] \right\}$$
$$+ \left[\frac{1}{2}(1-w_1-w_2)x\right] X \geq 0$$

Finally, a pure opportunist i votes (Y_i, N_j) rather than (N_i, Y_j) if:

$$\beta_i \left\{ \begin{array}{c} -x(b_i^j + d) - [x(w_1 + w_2) - (1-x)w_1](c-d) \\ - \left[w_1 + w_2 + \frac{1}{2}x(1-w_1-w_2)\right]\left[\left(\hat{x}^r b_i^i - xb_i^j\right) - (x-\hat{x}^r)d\right] \end{array} \right\}$$
$$+ \left[w_1 + w_2 + \frac{1}{2}x(1-w_1-w_2)\right] X \geq 0$$

All three conditions are satisfied if β_i is sufficiently close to zero.

Notation

$i \in \{l, m, r\}$ a leader attached to party I

y_i policy designed by leader i in office

α prior belief that a leader is competent

x prior probability that a leader designs a good policy

$\hat{\alpha}^v$ where $v \in \{c, r\}$, voters' posterior belief that a leader is competent when he voted for his policy in period 1 (c), or against (r).

$\hat{\alpha}^p$ where $p \in \{g, b\}$, a leader's posterior belief that he is competent when he has observed that his policy in period 1 is good (g), bad (b)

$\hat{x}^v$ voters' posterior probability that leader i designs a good policy in period 2

$\hat{x}^p$ leader i's posterior probability that he designs a good policy in period 2

b_i^i increase in social welfare according to leader i if a good policy y_i is continued

b_i^j increase in social welfare according to leader i if a good policy y_j is continued

c decrease in social welfare when a bad policy is continued

d decrease in social welfare when a policy is reversed

$\beta_i \in [0, \bar{\beta}]$ value attached to social welfare by leader i

X private rents from being in office in a period

w probability that an incumbent plays the dishonest voting strategy (Section 4)

w_1, w_2 probability that a leader is a 'pure opportunist', 'moderate opportunist' (Section 5)

K private cost of acquiring information about the other leader's policy