TI 2005-080/1
Tinbergen Institute Discussion Paper

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Party Governance and the Selection of Parliamentarians*

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9th August 2005

Abstract

This paper examines the incentives for a party leader in office and for a parties' rank-and-file to replace a sitting member of parliament. As to the leader's decision, we show that the leader prefers to replace a critical member of parliament who votes against the leader's policy. A competent leader designing efficient policies replaces a critical member since the member is unable to evaluate policies. A critical member may also have discovered a policy failure if the leader designs inefficient policies. In that case, the leader infers that the critical member has the ability to learn the quality of policies. An incompetent leader who cares about his reputation rather prefers that the member of parliament is incompetent. To reduce the risk that a future policy failure is discovered, an incompetent leader therefore replaces a critical member and keeps a member who supports the inefficient policy.

Keywords: members of parliament, party governance, political parties, candidate selection, legislative turnover.

JEL codes: D72, D78

*A part of this research was conducted during a visit at the University of Heidelberg. I thank the members of the Alfred Weber-Institute for their hospitality. I thank Robert Dur and Otto Swank for their guidance and valuable advice. Moreover, I thank Micael Castanheira, Benoit Crutzen, Hans Gersbach, Markus Muller, and seminar participants in Heidelberg and Rotterdam for their comments. I gratefully acknowledge financial support from NWO, KNAW, and VSNU through a Vernieuwingsimpuls grant and from Vereniging Trustfonds.

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1 Introduction

Office holders may continue pursuing a policy even if they know that the policy is not in the public interest. One reason may be that the executive cares about his reputation of being competent (see e.g. Dur, 2001, Chiu, 2002, Beniers and Dur, 2004, Majumdar and Mukand, 2004). To protect society for an inefficient project, implementation therefore normally requires the support of a majority of parliament. Members of parliament are expected to evaluate the pros and cons of projects and to vote on their implementation. Hence, the ability of parliamentarians to evaluate the consequences of policies is likely to have a major impact on the quality of government decision making.

Although voters elect the members of parliament, the set of candidates is to a large extent predetermined inside the distinct parties. Each party decides before the elections which members are allowed to stand for parliament. Moreover, under proportional elections the position of each candidate on the party list affects the candidates' probability of obtaining a legislative seat.[1] Particularly, if lists are closed the electorate only determines the distribution of seats among the parties. The order of the party list is decided on by means of the parties' candidate selection process. Office holders may exert influence on the candidate selection process, especially if an office holder is also the leader of the party. The extent to which an office holder can affect the composition of parliament depends on the internal organization of the party.

Political scientists show that parties vary significantly in the organization of their candidate selection process.[2] Lundell (2004) classifies for a large number of parties the degree of centralization of the candidate selection process. In some parties, mainly in the Nordic countries, ordinary members of the party are allowed to decide on the list. Other parties in e.g. Israel, Italy, and Spain exhibit a more centralized structure in which the party leader or a special committee makes up the list. This raises the question how party governance affects the selection and functioning of

[1] Proportional elections can be found in many, mainly European, countries among others in Austria, the Netherlands, Belgium and Spain. In Germany, there is a mixed system in which one half of the parliament is elected using party lists while the other half is elected by majority rule in several districts. An overview of electoral systems is given in Lijphart (1994).

[2] See, for instance, Pennings and Hazan (2001) and subsequent papers in the special issue on candidate selection of *Party Politics*, 2001 7(3).

parliament. Persson and Tabellini (2003, p. 21) state that "if lists are drawn up by party leaders (as is commonly the case), the ranking is likely to reflect criteria unrelated to competence in providing benefits to voters, such as party loyalty or effort within the party". Empirical evidence suggests that centralized parties impose party discipline inducing members of parliament to support the parties' platform.[3] Party discipline seems to be in conflict with the task of parliament to control the government. Particularly, this may result in inefficient decisions if the party in office constitutes a majority in parliament, sufficient to implement policies.[4]

The main objective of this paper is to examine the incentives to replace a sitting member of parliament. We compare a situation in which the leader in office is entitled to replace the member with a situation in which the rank-and-file of the party decides on replacement. We show under which conditions the replacement decision of the leader is not optimal from the society's point of view. We develop a simple two-period model with the same leader in office in each period. In every period, the leader designs one policy which is either good or bad. A competent leader designs good policies while an incompetent leader designs bad policies. The leader knows the quality of the policies. Implementing a policy requires the support of the member of parliament who receives a private signal about the policy's quality. We consider a situation in which the member responds to his signal and prefers to implement only good policies. A competent member always receives a correct signal while an incompetent member's signal is correct only by chance. At the end of period 1, the rank-and-file or the leader decides on replacing the member active in period 1 with a new member. The rank-and-file does not observe the quality of the policies. The rank-and-file's objectives are assumed to be in line with the public interest. The leader is either an idealist, caring about the public interest, or an opportunist, caring about his reputation of being competent. An idealistic leader is assumed to be competent whereas an opportunistic leader is either competent or

[3] See Bowler, Farell and Katz (1999) and Kam (2001). Hix (2004) shows that members of the European Parliament vote more in line with the preferences of their national party when the electoral system is more party centered (such as proportional elections) and the selection of candidates is centralized. Recently, Grossman and Helpman (2005) examine how the level of local public spending depends on party discipline.

[4] In a parliamentary system, the party or parties in office normally constitute a majority in parliament. By contrast, in a presidential system the leader in office (the president) and the members of parliament are elected separately. As a result, the leader in office may be affiliated with a different party than the majority in parliament (divided government).

incompetent. The leader's ability and motivation are private information.

We show that the leader replaces the member only if the member does not support the leader's policy. In other words, critical parliamentarians are replaced. The intuition is as follows. A critical member of parliament received negative information about the leader's policy. Consequently, a leader who designs good policies infers that a critical member is incompetent. The leader knows that an incompetent member may vote against good policies. An idealistic as well as an opportunistic leader prefers that a good policy is implemented. The former because implementation is in the public interest, the latter since implementation improves the leader's reputation. Hence, a competent leader replaces a critical member of parliament. A leader may also be incompetent designing inefficient policies. In that case, a critical parliamentarian received the correct information and is most likely competent. A competent member is more likely to discover a policy failure than an incompetent member. Reputational concerns therefore induce an incompetent leader to replace a critical member. Along the same lines, we show that a leader always keeps a member who supports the leaders policy. A competent leader keeps a loyal member since the member is most likely competent. An incompetent leader prefers a loyal member because the member is unable to evaluate policies.

A centralized party structure thus implies that loyal members are not replaced and critical members are replaced. By contrast, we show that the rank-and-file prefers to replace the member independent of his vote, to reduce the risk of a wrong decision in period 2. The likelihood of a wrong decision is lower with two different members than with one member present in both periods. From the societies' point of view, the leader is thus too conservative in replacing sitting members of parliament. We would therefore expect a higher turnover of parliamentarians if the selection process becomes more decentralized. Empirical observations from the Netherlands seem to be in line with this expectation. We calculated the turnover rate for the three major political parties in the Netherlands after each election since 1952 by using information on the composition of the Dutch parliament. We found that especially over time there are significant changes. The average turnover rate of parliamentarians after an election rose from about 25% in the fifties to almost 60% after the 2003 elections. This increase in legislative turnover is partially due to stronger electoral fluctuations. However, controlling for electoral volatility we still

find that mainly in the sixties and in the last decade sitting members of parliament are replaced more often than before (see Figure 1 and 2 in the Appendix). At the same time, parties changed the organization of their candidate selection process. Especially in the sixties, party members called for more influence on the composition of the party list. Nowadays, almost all parties in the Netherlands exhibit a more decentralized selection process than in the 1950's (Katz and Maier, 1992, Koole, 1992). This trend towards decentralized candidate selection processes is observed in several European countries (Bille, 2001). In a decentralized party, members of parliament who support the party leader may be more easily replaced than if the leader can exert influence on the list.[5]

The set-up of the paper is as follows. Section 2 discusses the literature related to this paper. Section 3 describes the model. Section 4 examines the selection of the member of parliament for a decentralized party. Section 5 examines the incentives of the leader to replace the member. Section 6 compares the two governance forms. Section 7 concludes.

2 Related Literature

The internal functioning of political parties in selecting and motivating politicians has received little attention from economists so far. Recently, Caillaud and Tirole (1999, 2002) provide a first analysis of the use of intra-party competition to motivate the leader of the party. Caillaud and Tirole (1999) examine how the possibility for a parties' rank-and-file to overrule the leader's policy affects the incentive to design high quality policies. Policies differ both in quality and in policy position. As leaders are office oriented, they design policies in line with the median voter's policy preferences. The rank-and-file may propose a different policy by overruling the leader. However, overruling comes at a cost since the rank-and-file never designs a high quality policy. Consequently, there is no incentive to overrule in a centrist

[5]Matland and Studlar (2004) find that legislative turnover is significantly higher under proportional elections than under majoritarian elections. One reason for this may be that under majoritarian elections legislators have a stronger incentive to acquire a so-called "personal vote", see Cain, Ferejohn and Fiorina (1987) and Carey and Shugart (1995). Parties may be reluctant to replace an incumbent legislator who attracts many voters. Matland and Studlar do not examine how changes in a parties' governance structure affects the turnover rate over time for a given electoral system.

party since there the leader designs policies in line with the preferences of the rank-and-file. As a result, the incentive for the leader of a centrist party to design a high quality policy is low reducing the parties' electoral chances.

Caillaud and Tirole (2002) show that intra-party competition for the position of the leader (primaries) may increase the candidates' incentives to design good projects. The reason is that uninformed voters infer that the candidates designed a good project when both candidates propose the same project (internal validation). A primary therefore increases the returns to exerting effort in designing the single good project. However, intra-party competition discourages the candidates to exert effort when the quality of projects is publicly revealed with a large probability (external validation). In that case, designing the good policy results almost immediately in an electoral success in a hierarchical party whereas an additional hurdle has to be taken in a party using primaries. Castanheira, Crutzen and Sahuguet (2004) build on Caillaud and Tirole (2002) examining how the internal organization of a party depends on the governance structure selected by the other party running for office. They show that the rank-and-file uses primaries to select the leader if inter-party competition is low. In Crutzen (2004), the rank-and-file can discipline legislators by using the party list. Crutzen shows that if the order of the list depends on politicians' behavior, rent extraction may be higher under majoritarian elections than under proportional elections, in contrast with Persson and Tabellini (2000).

Our paper differs from Caillaud and Tirole (1999, 2002) and from Crutzen (2004) in several respects. Most importantly, in our paper the replacement decision does not work as a disciplining device but rather as a selection device. We compare the selection of parliamentarians who differ in ability for different party governance structures. The party leader has an informational advantage over the consequences of the policies. As a consequence, an idealistic as well as an opportunistic leader replaces the member if a new member is more likely to support implementation.

Carrillo and Mariotti (2001) also study a parties' incentive to replace incumbent politicians. They show that voters prefer to replace incumbents more often than the two competing parties. This stems from the fact that each party cares only about beating the candidate of the other party during the elections. By contrast, voters prefer to select the candidate with the highest expected ability. Voters learn about the ability of a candidate through his campaign performance. The ability of

a new candidate is surrounded by a higher degree of uncertainty than the ability of an incumbent politician. As a result, the probability of electing at least one high qualified politician is larger with two new candidates than when two mediocre incumbents are not replaced. Carrillo and Mariotti thus show that a parties' turnover rate may be too low from the societies' point of view, like in our paper. In our paper, however, the difference in replacement strategies stems from the information asymmetry about the effects of policies.

Indridason (2003) shows that the electoral chances of a party may improve if a parliamentarian votes against the leader in office. In that paper, each member of parliament represents a district with distinct policy preferences which are unknown to the leader in office. As voting against the office holder's policy is assumed to be costly, dissent is a credible signal about the preferences of the member's district. This enables the office holder to design policies more in line with the interest of the district's electorate. In our paper, voting against the leader's policy may also be in the public interest since the policy may be inefficient. The reason that critical parliamentarians are replaced is not due to conflicting policy preferences within a party but stems from the selection of members on the basis of their ability.

In our paper, the leader can exert influence on the member's voting behavior in period 2 by replacing critical members. This may lead to inefficient selection of parliamentarians. Some papers show that the ability of political parties to exert influence on their members' voting behavior is a rationale for the existence of the party. For instance, in Snyder and Ting (2002) there are costs of joining a party which are increasing in the distance between a candidate's ideal platform and the platform of the party. As joining is costly, Snyder and Ting show that parties enable candidates to credibly signal their preferences to the voters. In Levy (2004) organizing into a party enables candidates with different policy preferences to reach a compromise on a policy platform. A party thus works as a commitment device towards voters since policy promises are not credible if a candidate operates independently.

3 The Model

The rationale for the existence of parliament is that the leader in office may design a project detrimental to the public interest. To protect society for such a project, implementation of a project requires the support of parliament. We focus on how political parties select their members of parliament given that members may differ in their ability. The internal organization of the party determines which player is entitled to replace a member of parliament. We compare a centralized organization, in which the leader in office may replace a member, with a decentralized structure in which the rank-and-file decides on replacement.

3.1 Polity

We consider a two-period model. In both periods, the same leader is in office. In each period, this leader designs one policy y_t, where $t \in \{1, 2\}$. A policy lasts for one period. The leader is either competent or incompetent. A competent leader designs good policies whereas an incompetent leader designs bad policies. The leader knows his own ability. All other players have a prior belief about the competence of the leader denoted by α.

Implementation of a policy requires the support of parliament. In our model, parliament is represented by a single member. This member MP decides on the implementation of y_t. The MP in period t receives a private signal $s_t \in \{g, b\}$ which may contain information about the quality of y_t. The signal $s_t = g$ says that y_t is good, while the signal $s_t = b$ says that y_t is bad. When the MP is competent, his signal is correct: $s_t = g$ if and only if y_t is good. When the MP is incompetent, his signal says that y_t is good or bad both with probability $\frac{1}{2}$: $\Pr(s_t = g \mid y_t = \text{good}) = \frac{1}{2}$. The ability of an MP is unknown to all players including the MP himself. The prior belief that an MP is competent is denoted by λ. The posterior beliefs about the competence of the leader and of an MP are denoted by $\hat{\alpha}$ and $\hat{\lambda}$, respectively.

After receiving the private signal, the MP votes in favor of or against implementation of y_t, $v_t \in \{Y, N\}$. If a good policy y_t is implemented, the benefit for the public in period t is $G > 0$. Implementing a bad policy y_t implies a cost for the public denoted by $B > 0$. The payoff to the public in period t is normalized to zero if no policy is implemented. Note that the payoff of an implemented policy

is not observable to the public. In the analysis, we distinguish two cases. One in which the expected benefits of implementing a policy without further information are positive: $\alpha G - (1-\alpha)B \geq 0$, and one in which the expected benefits without receiving a signal are negative: $\alpha G - (1-\alpha)B < 0$.

3.2 Party organization

At the end of period 1, there is a possibility to replace the member from the first period MP_1 with a new member MP_2. The internal organization of the party determines which player is entitled to make the replacement decision. In a centralized party, the leader is allowed to replace MP_1. In a decentralized party, the rank-and-file of the party, represented by a single player RF, decides whether MP_1 is replaced.[6]

3.3 Politicians' objectives

We assume that the leader is either an idealist or an opportunist. An idealistic leader acts in the public interest. An opportunistic leader cares about his reputation of being competent. More precisely, an opportunistic leader maximizes the belief the public holds about his competence at the end of period 2.[7] The public is informed about the implementation decision on y_1 and y_2 and about the internal organization of the party. The public does not observe the replacement decision but takes into account under which conditions MP_1 is replaced. In the conclusions, we discuss the implications of relaxing this assumption.

For simplicity, we assume that an idealistic leader is always competent. The analysis does not change when an idealistic leader may be incompetent. The reason is that an incompetent idealist has no incentive to design a policy. An incompetent leader is thus always an opportunist while a competent leader is either an idealist or an opportunist. The motivation of the leader is private information. The prior belief that a competent leader is an opportunist is denoted by w. The rank-and-file of the party cares about the public interest. Table 1 summarizes the game.

[6] We abstract from the possibility to replace the leader after period 1. See the conclusions for a further discussion on this.

[7] An opportunistic leader may, for instance, care about the wage after he left politics, which depends positively on perceived ability.

Table 1: Overview of the game

Players: leader in office, members MP_1 and MP_2, rank-and-file RF.

Timing:
Period 1

- Nature chooses the type (ability and motivation) of each player.
- The leader designs y_1.
- MP_1 receives a signal about the quality of y_1.
- MP_1 votes on implementing y_1.
- The leader (centralized party) or RF (decentralized party) decide whether to replace MP_1.

Period 2

- The leader designs y_2.
- MP_1 or MP_2 receives a signal about the quality of y_2.
- MP_1 or MP_2 votes on implementing y_2.

Payoffs

- *Benefits to the public in period t:* $G > 0$ if a good policy y_t is implemented, $-B < 0$ if a bad policy y_t is implemented, 0 if no policy is implemented.

3.4 Definition of equilibrium

The model discussed above defines a game for each governance structure. If the party is organized decentrally, there is a game between the rank-and-file and the member of parliament in each period. Section 4 presents a Perfect Bayesian Equilibrium of this game. In such an equilibrium neither player has an incentive to deviate from his equilibrium strategy, given the strategies of all other players. Beliefs are formed using Bayes' rule. If the party is organized centrally, there is a game between

the leader and the members of parliament. Section 5 derives a Perfect Bayesian Equilibrium of this game. In Section 6, we compare the outcomes of each game and examine the conditions under which the replacement decision of the leader is in the public interest.

There exist more than one equilibrium in each of these games. We focus on equilibria in which the member of parliament responds to information. The following assumption ensures an active role for parliament in each period.

Assumption 1: $\lambda \geq \left|\frac{\alpha G-(1-\alpha)B}{\alpha G+(1-\alpha)B}\right|$

Assumption 1 says that a member is competent with a sufficiently high probability. As a result, a private signal leads an MP to respond to his signal in period 1 and 2. If Assumption 1 were violated, parliament would be redundant and selection would not play a role.

4 Decentralized party

In this section, we discuss an equilibrium of the game in which the RF takes the replacement decision. To ensure a time consistent solution, the game is solved by backward induction. Initially, assume that the ex ante benefits of implementing a policy without receiving a signal are negative: $\alpha G - (1-\alpha)B < 0$. At the end of this section, we discuss the results if we assume that $\alpha G - (1-\alpha)B \geq 0$.

4.1 Period 2

Suppose that in period 1 MP_1 votes in line with his signal. That is $v_1 = Y$ if and only if $s_1 = g$. In Subsection 4.3 we identify under which condition this is a best response. Furthermore suppose that the RF has kept MP_1. Now consider the voting behavior of MP_1 in period 2.

By assumption, y_2 yields G if and only if y_1 is good. That is, a competent leader always designs a good project, and an incompetent leader always designs a bad project. This feature of the model has direct implications for the information MP_1 can infer from the signals known in period 2. MP_1's posterior beliefs about

the competence of the leader, conditional on s_1 and s_2, are:

$$\begin{aligned}
\widehat{\alpha}\left(s_1 = g, s_2 = g\right) &= \left[\frac{\alpha\left[\lambda + (1-\lambda)\frac{1}{4}\right]}{\alpha\left[\lambda + (1-\lambda)\frac{1}{4}\right] + (1-\alpha)(1-\lambda)\frac{1}{4}}\right] > \alpha \\
\widehat{\alpha}\left(s_1 = g, s_2 = b\right) &= \alpha \qquad (1) \\
\widehat{\alpha}\left(s_1 = b, s_2 = g\right) &= \alpha \\
\widehat{\alpha}\left(s_1 = b, s_2 = b\right) &= \left[\frac{\alpha(1-\lambda)\frac{1}{4}}{\alpha(1-\lambda)\frac{1}{4} + (1-\alpha)\left[\lambda + (1-\lambda)\frac{1}{4}\right]}\right] < \alpha.
\end{aligned}$$

Equation (1) shows that two positive signals increase the probability that the leader is competent, whereas two negative signals decrease the probability that the leader is competent. Two opposite signals cancel each other out. The reason is that $s_1 \neq s_2$ imply that MP_1 is not competent. A competent MP_1 receives the same signal on y_2 as on y_1, since the two policies are of the same quality. The signals of an incompetent MP_1 do not contain information, so that $\widehat{\alpha}\left(s_1 \neq s_2\right) = \alpha$. In conjunction with our assumption that $\alpha G - (1-\alpha)\, B < 0$, (1) implies that if $s_1 = b$, it is always optimal for MP_1 to vote against implementation, $v_2 = N$. Likewise, if $s_1 = g$ and $s_2 = b$ MP_1 votes $v_2 = N$. Suppose $s_1 = s_2 = g$. In that case, MP_1 votes $v_2 = Y$ if:

$$\widehat{\alpha}\left(s_1 = g, s_2 = g\right) G - \left[1 - \widehat{\alpha}\left(s_1 = g, s_2 = g\right)\right] B \geq 0.$$

This requires that λ is sufficiently high. As we assumed an environment in which the member of parliament responds to information (Assumption 1), this condition hold. Hence, if RF has kept MP_1 in period 2, the policy y_2 is implemented if and only if the signal set is $\{s_1 = g, s_2 = g\}$.

Now suppose that the RF has replaced MP_1 so that MP_2 represents parliament in period 2. From the implementation decision on y_1, MP_2 can infer the signal MP_1 has received in period 1. Consequently, MP_2 can base his vote decision on $\{s_1, s_2\}$. Two conflicting signals imply that at least one MP is incompetent. As MP_2 does not know which MP is incompetent, again the signals cancel out. Therefore, MP_2 votes $v_2 = Y$ if the signals set is $\{s_1 = g, s_2 = g\}$ provided that the signals are sufficiently informative. The incentive to vote $v_2 = Y$ with $s_1 = s_2 = g$ is stronger for MP_2 than for MP_1. The reason is that the probability that y_2 is good is higher when two members receive one good signal than when MP_1 receives two good signals. Lemma

1 summarizes the voting behavior in period 2.

Lemma 1 *Suppose* $\alpha G - (1-\alpha) B < 0$. *Then, in period 2 the MP votes in favor of* y_2 *if and only if the signal set is* $\{s_1 = g, s_2 = g\}$.

4.2 Replacement decision

Lemma 1 implies that the replacement decision is only relevant if $s_1 = g$. If $s_1 = b$, then both MP_1 and MP_2 prefer to vote $v_2 = N$. Therefore, suppose that $s_1 = g$. Replacing MP_1 yields an expected payoff to the RF equal to:

$$\widehat{\alpha}\left(s_1 = g\right)\left[\lambda + (1-\lambda)\frac{1}{2}\right] G - \left[1 - \widehat{\alpha}\left(s_1 = g\right)\right](1-\lambda)\frac{1}{2}B \tag{2}$$

$$\text{with } \widehat{\alpha}\left(s_1 = g\right) = \Pr\left(\alpha \mid s_1 = g\right) = \left[\frac{\alpha\left[\lambda + (1-\lambda)\frac{1}{2}\right]}{\alpha\left[\lambda + (1-\lambda)\frac{1}{2}\right] + (1-\alpha)(1-\lambda)\frac{1}{2}}\right] > \alpha.$$

The likelihood that a good project will be implemented equals the probability that the leader is competent, conditional on $s_1 = g$, times the probability that MP_2 receives signal $s_2 = g$. The first term of (2) denotes this. Implementation of a bad project requires that both the leader and MP_2 are incompetent, and that MP_2 receives signal $s_2 = g$. This is denoted by the second term of (2).

Keeping MP_1 yields an expected payoff to the RF equal to:

$$\hat{\lambda}(s_1 = g)G - \left[1 - \widehat{\alpha}\left(s_1 = g\right)\right]\frac{1}{2}B + \left[\widehat{\alpha}\left(s_1 = g\right) - \hat{\lambda}(s_1 = g)\right]\frac{1}{2}G \tag{3}$$

$$\text{with } \widehat{\lambda}\left(s_1 = g\right) = \Pr\left(\lambda \mid s_1 = g\right) = \left[\frac{\alpha\lambda}{\alpha\left[\lambda + (1-\lambda)\frac{1}{2}\right] + (1-\alpha)(1-\lambda)\frac{1}{2}}\right].$$

To understand (3), notice that with $s_1 = g$ there are three possible situations in period 2. First, MP_1 and the leader are both competent. This situation occurs with probability $\hat{\lambda}(s_1 = g)$. Then, the good policy y_2 is always implemented (first term). Second, the leader and MP_1 are both incompetent. This occurs with probability $1 - \widehat{\alpha}\left(s_1 = g\right)$. In that situation, the bad policy y_2 is implemented with probability $\frac{1}{2}$ (second term). Finally, with probability $\widehat{\alpha}\left(s_1 = g\right) - \hat{\lambda}(s_1 = g)$ the leader is competent while MP_1 is incompetent. Then y_2 is also implemented with probability $\frac{1}{2}$ (third term). When $s_1 = g$, it is not possible that MP_1 is competent while the leader is incompetent.

A comparison between (2) and (3) leads to the main result of this section.

Proposition 1 *Suppose Lemma 1 holds. Then, always replacing MP_1 is a best response for the RF.*

Proof. See the Appendix. ■

To understand Proposition 1, notice that keeping MP_1 would amount to letting the same member to evaluate the same leader twice. The probability that a single member is competent is lower than the probability that one out of two members is competent. Therefore, the probability that one member makes a mistake twice exceeds the probability that two independent members make the same mistake. As a result, replacing MP_1 reduces the risk that a bad policy is implemented. In period 2, RF wants a fresh view on the leader's policy.

4.3 Period 1

So far we have assumed that in period 1 MP_1 votes in line with his signal. Let us now check whether this is a best response. Our assumption that $\alpha G - (1-\alpha)\, B < 0$ implies that without further information about the project, the MP prefers the status quo. Hence, $s_1 = b$ induces MP_1 to vote $v_1 = N$. Thus, what matters is if $s_1 = g$ leads MP_1 to vote $v_1 = Y$. Suppose $s_1 = g$. A sufficient condition to support y_1 is that the policy yields a positive payoff in period 1:

$$\hat{\alpha}\,(s_1 = g)\, G - [1 - \hat{\alpha}(s_1 = g)]\, B \geq 0. \tag{4}$$

This condition is satisfied given the assumption that λ is sufficiently high.

4.4 Results if $\alpha G - (1-\alpha)B \geq 0$

The analysis of the case in which $\alpha G - (1-\alpha)B \geq 0$ is analogous to the analysis above. In that case, y_2 is not implemented if and only if the signal set is $\{s_1 = b, s_2 = b\}$. In period 1, MP_1 follows his signal. When MP_1 receives $s_1 = b$ and votes against y_1, he is replaced. Again the reason is that replacement lowers the probability of a wrong decision. Now replacement reduces the risk that a good policy is not implemented. Concluding, RF benefits from replacing MP_1 in either

case. This is because two signals received by one member are correlated. In the proof of Proposition 1, we formally derive the replacement decision in each case. In the next section, we consider the replacement decision in a centralized party.

5 Centralized party

In this section, we discuss an equilibrium of the game in which the leader takes the replacement decision. Again we solve the model by backward induction. Again we first consider the case that $\alpha G - (1-\alpha)B < 0$. At the end of the section, we discuss the other case.

5.1 Period 2

The analysis of period 2 is the same as in the previous section. For this reason, we only summarize the results of period 2. Suppose MP_1 votes in line with his signal in period 1. When MP_1 is not replaced, the posterior beliefs about the competence of the leader are again denoted by (1). From (1), we know that two opposite signals cancel out. As a result, y_2 is implemented if and only if $s_1 = s_2 = g$ given Assumption 1. If MP_1 is replaced, two opposite signals cancel out as only one signal is correct. Therefore, MP_2 supports y_2 only if $s_1 = s_2 = g$. Hence, Lemma 1 also summarizes the MP's voting behavior in period 2 if the party is centralized.

5.2 Replacement decision

The replacement decision is only relevant if $s_1 = g$. Suppose $s_1 = g$. Contrary to the rank-and-file, the leader knows the quality of y_1. As a result, the leader's posterior belief about the competence of MP_1 is different than the posterior belief of RF about MP_1. Let us now discuss the incentive for each type of leader to replace MP_1.

Suppose the leader is an idealist designing good policies. Consequently, it is in the public interest when y_2 is implemented. Implementation requires that $s_2 = g$. A competent MP receives $s_2 = g$ more often than an incompetent MP given that y_2 is good. Therefore, the leader does not replace MP_1 if MP_1 is competent with a higher probability than MP_2. The leader's posterior belief about the competence

of MP_1 given $v_1 = Y$ is denoted by:

$$\widehat{\lambda}\left(s_1 = g\right) = \Pr\left(\lambda \mid s_1 = g, y_1 = \text{good}\right) = \left[\frac{\lambda}{\lambda + (1-\lambda)\frac{1}{2}}\right] > \lambda. \tag{5}$$

The posterior belief that MP_1 is competent increases since the member received the correct information. An idealistic leader thus keeps MP_1 if $v_1 = Y$ to enhance the probability that y_2 is implemented.

Suppose the leader is an opportunist and competent. An opportunistic leader does not care about the public interest, but cares about his reputation of being competent. In equilibrium, the public knows that y_2 is implemented only if $s_2 = g$. Moreover, suppose that the public beliefs that MP_1 is not replaced if $v_1 = Y$. The expected payoff for the leader if MP_1 is replaced are then:

$$\left[\hat{\lambda} + (1-\hat{\lambda})\frac{1}{2}\right]\hat{\alpha} + (1-\hat{\lambda})\frac{1}{2}\alpha, \tag{6}$$

where $\hat{\lambda}$ is denoted by (5) and $\hat{\alpha} > \alpha$ is denoted by (1). The reputation of the leader improves if y_2 is implemented. If y_2 is not implemented, the public believes that the signal set is $\{s_1 = g, s_2 = b\}$. Then the two conflicting signals cancel out and the posterior belief about the leader's competence is equal to the prior. The expected payoff for the leader if MP_1 is replaced are equal to:

$$\left[\lambda + (1-\lambda)\frac{1}{2}\right]\hat{\alpha} + (1-\lambda)\frac{1}{2}\alpha \tag{7}$$

As replacement is not observable, the posterior beliefs about the competence of the leader are the same as in (6). However, the probability that y_2 is implemented depends on whether MP_1 is replaced. Keeping MP_1 is optimal if condition (6) $>$ (7). This is always satisfied. The reason is simple. Implementation of y_2 improves the reputation of the leader. A competent member supports the implementation of a good policy more often than an incompetent member. MP_1 is competent with a higher probability than MP_2 since MP_1 received the correct signal in period 1. Consequently, alike an idealistic leader, an opportunistic and competent leader has no incentive to replace MP_1 if $v_1 = Y$.

Finally, suppose the leader is incompetent. Along the same lines as above, the opportunistic leader maximizes the probability that y_2 is implemented. The leader

knows, however, that y_2 is bad. A bad policy may only be implemented in case the member is incompetent. From $v_1 = Y$, the leader infers that MP_1 is incompetent, $\widehat{\lambda}(s_1 = g \mid y_1 = \text{bad}) = 0$. The incompetent leader therefore does not replace MP_1 if $v_1 = Y$ since an incompetent member may fail in screening y_2. Reputational concerns induce a leader to keep an incompetent parliamentarian.

5.3 Period 1

In period 1, MP_1 votes $v_1 = N$ if $s_1 = b$ given that $\alpha G - (1-\alpha)B < 0$. Suppose MP_1 receives $s_1 = g$. If MP_1 votes in favor of y_1, he is not replaced. However, there is also no reason for the leader to replace MP_1 if $v_1 = N$. In that case, the leader beliefs that $s_1 = b$ and that y_2 is never implemented. As a consequence, MP_1 supports y_1 if condition (4) holds.

5.4 Results if $\alpha G - (1-\alpha)B \geq 0$

Now consider the other case in which $\alpha G - (1-\alpha)B \geq 0$. In that case, the policy y_2 is always implemented if $v_1 = Y$. If $v_1 = N$, implementation of y_2 requires $s_2 = g$. The replacement decision is therefore only relevant if $v_1 = N$. As above, an idealistic as well as an opportunistic leader replace MP_1 if this increases the probability that y_2 is implemented. This desire for implementation induces the leader to replace MP_1 if $v_1 = N$. When the leader designs good policies, MP_1 is incompetent if $v_1 = N$. As a result, replacing MP_1 is optimal as MP_2 discovers more often that y_2 is good. When the leader designs bad policies, the leader's posterior belief about the competence of MP_1 increases if $v_1 = N$. However, implementation of a bad policy may happen only if the member is incompetent. An incompetent leader therefore replaces a competent but critical parliamentarian to prevent that a future policy failure is also discovered. In period 1, MP_1 follows his signal given Assumption 1.

The following proposition summarizes the replacement strategy of the leader for the cases in which replacement is relevant.

Proposition 2 *The leader strictly prefers not to replace MP_1 if $v_1 = Y$ and $\alpha G - (1-\alpha)B < 0$ and to replace MP_1 if $v_1 = N$ and $\alpha G - (1-\alpha)B \geq 0$.*

Proof. See the Appendix. ■

Proposition 2 says that in a centralized party there is an incentive to keep a member who supports the leader's policy and to replace a member who votes against the policy. Each type of leader prefers to increase the probability that y_2 is implemented. As a result, the leader selects members on the basis of their competence given the leader's own ability. When the leader designs good policies, he prefers a competent parliament. When the leader designs bad policies, he prefers an incompetent parliament. An incapable leader therefore either keeps a loyal incompetent MP or replaces a critical competent MP.[8] In the previous section, we showed that the rank-and-file selects a new member to obtain additional information about the quality of the second period policy. Let us now compare the selection of parliamentarians for the two governance forms.

6 Comparison

So far, we derived the selection of the member of parliament in period 2 for a centralized party and for a decentralized party. By assumption, the preferences of the RF are exactly in line with the public interest. The objectives of the leader, however, may conflict with the public interest. This raises the question whether a centralized candidate selection process is optimal from the societies' point of view. Therefore, suppose that RF may select a governance structure at the beginning of period 1. RF compares the expected payoff of policies implemented under a centralized party structure with those implemented under a decentralized structure. The voting behavior of MP_1 and MP_2 does not depend on the governance structure. However, the replacement strategy of the leader may be different than the replacement strategy of RF. As a result, the expected benefits of policies implemented in period 2 may depend on the governance structure.

The replacement strategy of the leader and RF coincides if $\alpha G - (1-\alpha)B \geq 0$. In that case, the leader and the RF benefit from replacing MP_1 if $v_1 = N$. The leader prefers a new member to enhance the probability that y_2 is implemented.

[8] In our model, a competent leader always designs a good policy while an incompetent leader always designs a bad policy. The replacement strategy of the leader does not change when a competent leader occasionally designs a bad policy and an incompetent leader sometimes designs a good policy. As long as the probability that y_2 is good (bad) increases sufficiently if y_1 is good (bad), a competent leader prefers a competent member while an incompetent leader prefers an incompetent member.

The rank-and-file prefers a new member to reduce the risk of a wrong decision in period 2. As a consequence, the rank-and-file is indifferent between a centralized and a decentralized party structure if $\alpha G - (1-\alpha)B \geq 0$.

The replacement strategies conflict, however, if $\alpha G - (1-\alpha)B < 0$. In this case, the leader prefers to keep MP_1 if $v_1 = Y$. The reason is that MP_1 supports implementation of y_2 more often than MP_2 given $v_1 = Y$. However, RF prefers a new member to reduce the risk that a bad policy y_2 is implemented. Replacing MP_1 if $v_1 = Y$ is therefore in the public interest. In this case, a centralized party thus deteriorates the selection of parliamentarians and decreases the expected benefits of period 2. As a consequence, the rank-and-file prefers a decentralized party organization. The incentive to organize the party decentrally becomes stronger if the trust in the capacities of the leader decreases.

Proposition 3 *Suppose RF selects the governance structure of the party at the beginning of period 1. RF is indifferent between a centralized and a decentralized party when* $\alpha G - (1-\alpha)B \geq 0$. *RF strictly prefers a decentralized party when* $\alpha G - (1-\alpha)B < 0$.

7 Conclusions

In this paper, we have compared the incentives of the leader and of the rank-and-file to replace a member of parliament. The leader replaces the member if this increases the likelihood of implementing the second period policy. A competent leader therefore replaces an incompetent parliamentarian. By contrast, an incompetent leader replaces a competent parliamentarian and keeps an incompetent one to prevent that a future policy failure is discovered. It is interesting to note that this result may also hold in a different setting. For instance, in a firm an employee who knows that he has made mistakes may prefer that the evaluation of his tasks is done by someone who is incompetent.

The selection of a member of parliament has been analyzed in a very stylized set-up ignoring several elements. Let us discuss some limitations of the model. First of all, we assumed that the replacement decision is not observed by the public. As a result, the leader replaces a member if a new member is more likely to support implementation in the second period. What happens if replacement is observable?

In that case, the reputation of the leader depends not only on the implementation decision but also on the replacement decision. This is because the reputation of the leader increases more if two members each support the implementation of one policy than if one member supports the implementation of both policies. As a result, there may be an incentive for an opportunistic leader to replace a member who supports implementation in the first period. However, this comes at the cost of being detected as an opportunist, since an idealistic leader keeps a member who supports implementation. Moreover, as we have shown, a member who supports implementation in period 1 is more likely than a new member to support implementation in period 2, irrespective of the quality of the policies. Therefore, with observable replacement there is still a strong incentive for an opportunistic leader to keep a loyal member and to replace a critical member of parliament.

Second, we considered members of parliament as truly concerned about the societies' interest. As a result, a member responds to negative information about the leader's policy. Clearly, a parliamentarian may also have career concerns. A member of parliament who cares about his position may ignore private information and vote such that he is not replaced. Selection then not only refers to the ability of a parliamentarian but also to his motivation. Third, we have abstracted from electoral competition between different parties. Elections enable voters to select an other party with a new leader and a new member of parliament. If the voters do not observe the replacement decision, our analysis remains unaffected. The outcome of the elections then only affects when the replacement decision matters but does not affect the incentive to replace a member. When replacement is observable, an idealistic leader may try to signal his motivation through the replacement decision. For instance, an idealist may keep a critical member if this increases his reelection chances. Finally, an interesting extension would be to allow the rank-and-file to replace the leader. The leader may then prefer to select incompetent members to prevent that a member of parliament becomes the new leader.[9] These extensions are left for further research.

[9] This relates to the analysis of Friebel and Raith (2004). They show that managers may have an incentive to select incompetent subordinates when there is a threat that a subordinate takes over the manager's position. Recently, Besley (2005) emphasizes the need for political economists to examine how political institutions perform in selecting the best citizens for office.

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Appendix: Turnover data

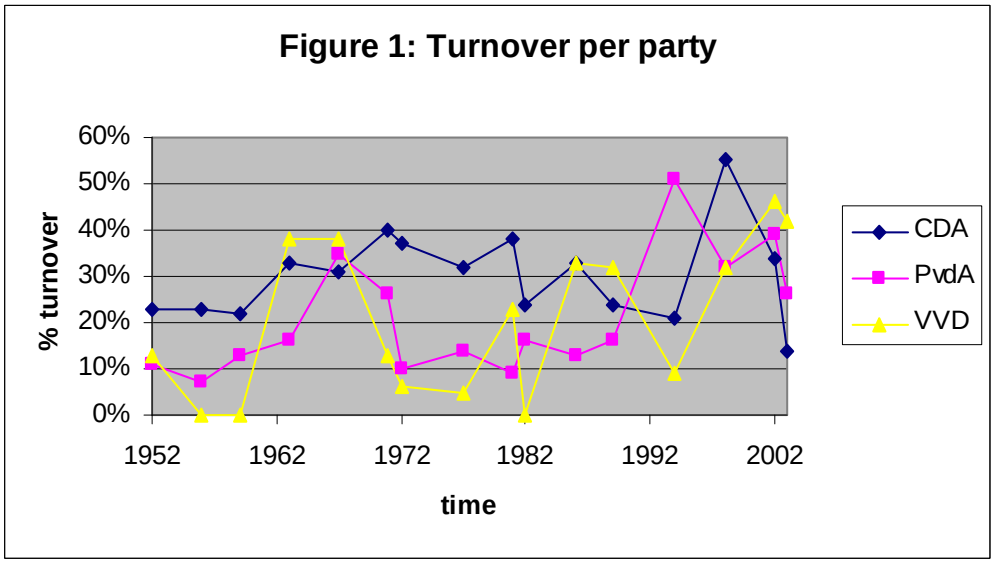
We compared the composition of the Dutch parliament a day before and a day after each election since 1952. To control for electoral fluctuations, we calculated the turnover rate for each party in the following way. Suppose party A obtained 30 seats during an election compared to 25 seats during the last election. In that case, the maximum number of legislators party A can keep is equal to 25. Then the percentage of legislative turnover due to party A is described by:

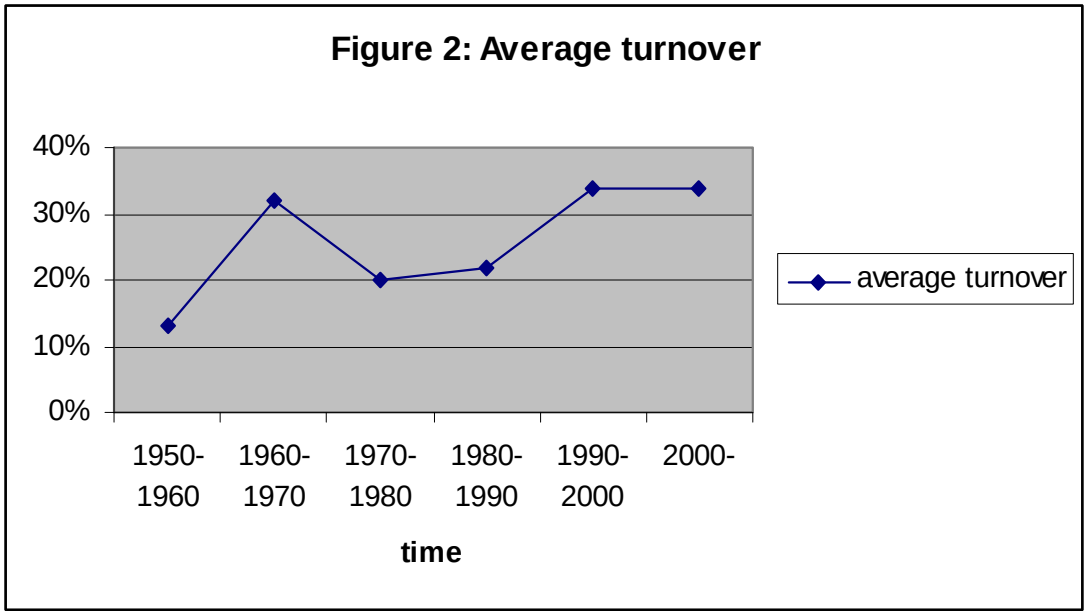
$$\left[\frac{\text{number of new legislators for party A - increase in seats}}{\text{number of seats before elections}}\right] * 100\%.$$

For instance, if there are 10 new legislators for party A then the turnover percentage is equal to $\left[\frac{10-5}{25}\right] * 100\% = 20\%$. Now suppose party A obtains 20 seats, a decrease compared to the last elections. Then the maximum number of legislators party A can keep is equal to 20. If there are then 10 new legislators, the turnover percentage is equal to $\frac{10}{20} * 100\% = 50\%$. More generally, the percentage of legislative turnover due to party A is then described by:

$$\left[\frac{\text{number of new legislators for party A}}{\text{number of seats after elections}}\right] * 100\%.$$

Figure 1 shows the turnover rate for each of the three major parties. Figure 2 shows the average turnover rate for each decade.





Proof. Proposition 1

We have to proof that always replacing MP_1 is a best respond for the RF. Suppose $\alpha G - (1-\alpha)B < 0$. In this case, the replacement decision is only relevant if $s_1 = g$. Suppose $s_1 = g$. Replacing is optimal if condition (2) $\geq$ (3). Rewriting yields that this holds if $\lambda\left[\hat{\alpha}G + (1-\hat{\alpha})B\right] \geq \hat{\lambda}G$. Inserting $\hat{\alpha}$ and $\hat{\lambda}$ denoted by (2) and (3) yields that replacement is optimal if $0 \geq \alpha G - (1-\alpha)B$.

Suppose $\alpha G-(1-\alpha)B \geq 0$. Replacement is now only relevant if $s_1 = b$. Suppose $s_1 = b$. Replacing MP_1 yields an expected payoff to the RF equal to:

$$\widehat{\alpha}\,(s_1 = b)\left[\lambda + (1-\lambda)\,\frac{1}{2}\right]G - \left[1 - \widehat{\alpha}\,(s_1 = b)\right](1-\lambda)\,\frac{1}{2}B$$

$$\text{with } \widehat{\alpha}\,(s_1 = b) = \Pr\left(\alpha \mid s_1 = b\right) = \left[\frac{\alpha(1-\lambda)\frac{1}{2}}{\alpha(1-\lambda)\frac{1}{2} + (1-\alpha)\left[\lambda + (1-\lambda)\frac{1}{2}\right]}\right].$$

Keeping MP_1 yields an expected payoff to the RF equal to:

$$\widehat{\alpha}\,(s_1 = b)\,\frac{1}{2}G - \left[1 - \widehat{\alpha}\,(s_1 = b) - \hat{\lambda}(s_1 = b)\right]\frac{1}{2}B$$

$$\text{with } \widehat{\lambda}\,(s_1 = b) = \Pr\left(\lambda \mid s_1 = b\right) = \left[\frac{(1-\alpha)\lambda}{\alpha(1-\lambda)\frac{1}{2} + (1-\alpha)\left[\lambda + (1-\lambda)\frac{1}{2}\right]}\right].$$

When the leader is competent, MP_1 is incompetent. Then y_2 is implemented with probability $\frac{1}{2}$ (first term). When MP_1 is competent, the leader is incompetent. In that case, MP_1 receives $s_2 = b$ and votes $v_2 = N$. Finally, it is also possible that both MP_1 and the leader are incompetent. Then y_2 is implemented with probability $\frac{1}{2}$ (second term). Comparing the expected payoff if MP_1 is replaced and if he is not replaced yields that replacement is optimal if $\lambda\left[\hat{\alpha}G + (1-\hat{\alpha})B\right] \geq \hat{\lambda}B$. Inserting $\hat{\alpha}$ and $\hat{\lambda}$ yields that replacement is optimal if $\alpha G - (1-\alpha)B \geq 0$. ■

Proof. Proposition 2

We have to proof that the leader replaces MP_1 if and only if $v_1 = N$. In the main text, we showed that the replacement decision is redundant if $v_1 = Y$ and $\alpha G - (1-\alpha)B \geq 0$ and if $\alpha G - (1-\alpha)B < 0$ and $v_1 = N$.

Suppose $v_1 = Y$ and $\alpha G - (1-\alpha)B < 0$. Suppose the leader is competent. As a result, y_2 will be good as well. An idealistic leader then does not replace MP_1 if:

$$\begin{aligned}\left[\hat{\lambda} + (1-\hat{\lambda})\frac{1}{2}\right]G \quad &\geq \quad \left[\lambda + (1-\lambda)\frac{1}{2}\right]G \\ &\Longrightarrow \quad \hat{\lambda} > \lambda,\end{aligned}$$

which always hold as $\hat{\lambda} = \left[\frac{\lambda}{\lambda + (1-\lambda)\frac{1}{2}}\right] > \lambda$. An opportunistic leader then does not

replace MP_1 member if:

$$\left[\hat{\lambda}+(1-\hat{\lambda})\frac{1}{2}\right]\hat{\alpha}_{v_t=Y}+(1-\hat{\lambda})\frac{1}{2}\hat{\alpha}_{v_1=Y,v_2=N}\geq\left[\lambda+(1-\lambda)\frac{1}{2}\right]\hat{\alpha}_{v_t=Y}+(1-\lambda)\frac{1}{2}\hat{\alpha}_{v_1=Y,v_2=N}$$
$$\Longrightarrow(\hat{\lambda}-\lambda)\left(\hat{\alpha}_{v_t=Y}-\hat{\alpha}_{v_1=Y,v_2=N}\right)\geq 0.$$

As showed in the main text, $\hat{\alpha}_{v_t=Y}>\hat{\alpha}_{v_1=Y,v_2=N}=\alpha$. The reputation of the leader improves if parliament votes in favor of rather than against y_2. Hence, the condition is always satisfied. Suppose the leader is incompetent. As $v_1=Y$, the leader infers that MP_1 is incompetent. The opportunistic leader then does not replace MP_1 if:

$$\begin{aligned}\frac{1}{2}\hat{\alpha}_{v_t=Y}+\frac{1}{2}\hat{\alpha}_{v_1=Y,v_2=N} &\geq (1-\lambda)\frac{1}{2}\hat{\alpha}_{v_t=Y}+\left[\lambda+(1-\lambda)\frac{1}{2}\right]\hat{\alpha}_{v_1=Y,v_2=N}\\ &\Longrightarrow \lambda\left(\hat{\alpha}_{v_t=Y}-\hat{\alpha}_{v_1=Y,v_2=N}\right)\geq 0.\end{aligned}$$

Suppose $v_1=N$ and $\alpha G-(1-\alpha)B\geq 0$. Suppose the leader is competent and an idealist. Then he replaces MP_1 if:

$$\left[\lambda+(1-\lambda)\frac{1}{2}\right]G\geq\frac{1}{2}G,$$

which always hold. Suppose the leader is competent and an opportunist. Then the leader replaces MP_1 if:

$$\left\{\left[\lambda+(1-\lambda)\frac{1}{2}\right]-\frac{1}{2}\right\}\left(\hat{\alpha}_{v_1=N,v_2=Y}-\hat{\alpha}_{v_t=N}\right)\geq 0,$$

which holds. Finally, suppose the leader is incompetent. The opportunistic leader now replaces MP_1 if:

$$\left\{(1-\lambda)\frac{1}{2}-(1-\hat{\lambda})\frac{1}{2}\right\}\hat{\alpha}_{v_1=N,v_2=Y}\geq\left\{\left[\hat{\lambda}+(1-\hat{\lambda})\frac{1}{2}\right]-\left[\lambda+(1-\lambda)\frac{1}{2}\right]\right\}\hat{\alpha}_{v_t=N}$$
$$\Longrightarrow(\hat{\lambda}-\lambda)\left(\hat{\alpha}_{v_1=N,v_2=Y}-\hat{\alpha}_{v_t=N}\right)\geq 0,$$

which again holds. ■