# A rationale for intra-party democracy

Zudenkova, Galina

21 May 2012

# A Rationale for Intra-Party Democracy*

Galina Zudenkova†

*Department of Economics and CREIP, Universitat Rovira i Virgili*
*Department of Economics, University of Mannheim*

**Abstract**

This paper provides a rationale for intra-party democracy within a political agency model with moral hazard. The focus is on the party's internal procedures for policy determination. I show that democratizing those procedures benefits the party leadership, which seeks to maximize joint reelection chances of the party's incumbents. The reason is that under intra-party democracy, the voters adopt less demanding reappointment rules and reelect the party's incumbents more often than under leaders-dominated party structure. My results therefore indicate that democratizing policy determination processes within the party is in the interests of both the leadership and the ordinary members. The voters in turn are equally well off regardless of the party's internal procedure for policy determination.

*JEL classification*: D72.

*Keywords*: Intra-party democracy; Leaders-dominated party; Policy determination; Party internal structure; Political agency; Moral hazard.

---

*The author is grateful to Montserrat Ferré, Jordi Massó, and seminar and conference participants at several institutions for useful comments and suggestions. Project ECO2011-25203 from the Spanish Ministry of Science and Innovation and grant 2011LINE-01 from Universitat Rovira i Virgili and Banco Santander are gratefully acknowledged. The usual disclaimer applies.

†Department of Economics and CREIP, Universitat Rovira i Virgili, Av. de la Universitat 1, Reus 43204, Spain. Department of Economics, University of Mannheim, D-68131 Mannheim, Germany (from August 2012). *E-mail address*: galina.zudenkova@gmail.com.

## 1. Introduction

Political parties have been recognized as essential to the efficient and proper functioning of democracy (see, for example, Schattschneider 1942, Duverger 1964, among many others). As such, they are expected to organize public opinion by offering voters choices at elections and to provide enough cohesion to organize the work of legislative and executive branches. Since much of policymaking takes place within the parties rather than in the public domain, it is important to study the internal functioning of political parties. There has been, however, less agreement about whether it is necessary for parties to organize themselves in internally democratic ways (see Michels 1915, Kirchheimer 1966, Duverger 1964, Katz and Mair 2002). But even if views still differ on the absolute necessity of intra-party democracy, most political scientists agree that there are often sound and even self-interested reasons for parties to adopt more open decision-making processes (see Teorell 1999, Scarrow 1999, 2005, Hazan and Rahat 2010). This primarily refers to two main intra-party procedures: selecting party candidates and defining policy positions. The literature has provided several formal arguments in favor of more democratic candidate selection methods, e.g., through primary elections (see Meirowitz 2005, Jackson et al. 2007, Adams and Merrill 2008, Serra 2011, Castanheira et al. 2012, among others). There is, however, no formal model, which provides a rationale for implementing more inclusive policy determination processes within the party, to the best of my knowledge. The present paper contributes to this line.

I formalize the party's internal policy determination procedure within a political agency model with moral hazard. In my framework, implementing intra-party democracy results in the party's best interest as the party's incumbents have greater chances of being reelected under more inclusive policy-setting procedures.

I consider a political party in a legislature. The party leaders seek to maximize the joint reelection chances of the party's incumbent congress members. Congress members affiliated with the political party are assumed to be purely office-motivated. They promote the interests of their home districts, e.g., district-specific public policies or local public goods. The party line (or party agenda) includes those district-specific policies, which are considered to be in the interests of the entire party, and also specifies their relative importance for the party's objectives. Only the policies included in the party line receive the party support on the floor of the legislature, and so are more likely to be implemented. Policy outcomes are assumed to be stochastic functions of the party support and therefore of corresponding policy weights. The greater the policy weight in the party line, the more likely that policy is to be implemented.

The party leadership might adopt different internal procedures to determine the party line. Following Scarrow (2005), I distinguish between a party structure with low levels of inclusiveness in decision-making processes (as in "leaders-dominated" parties, "parties of notables" or "cadre" parties) and that with higher inclusiveness levels (as in parties of "individual representation", "corporatist" parties, parties built on "basis democracy" or "mass" parties). In the context of the policy determination model under consideration, this suggests two options for the party internal structure. Under the first, labeled as leaders' dominance, ordinary party members are excluded from the agenda-setting process. The party leadership has the sole power to define the party line. Under the second, labeled as intra-party democracy, ordinary party members take part in setting the party line. They actually exert costly effort to bias the party agenda in favor of their preferred policies.

A representative voter in each district cares about implementation of a policy, which benefits his home district. Only the policy outcome is observed by the voter, not the corresponding policy weight. The voter realizes that whoever defines the party line cares about the incumbent's reelection and therefore can be held accountable for the policy outcome at the moment of election. I assume that the voter adopts a cutoff rule and reappoints the incumbent only when the corresponding policy outcome exceeds a critical threshold. Obviously, the voter might find it optimal to apply different thresholds for different internal structures of the party.

Indeed, in equilibrium, the voter is extremely demanding in the case of leaders-dominated party but much more tolerant in the case of intra-party democracy. Intuitively, the voter is rational, and so realizes that adopting a very demanding reappointment rule might become counterproductive under intra-party democracy. Indeed, the incumbents exert efforts to bias the party line in favor of their preferred policies. The effort is costly, and so might not pay off under very strict reappointment rules. Satisfying a very demanding voter actually becomes too costly for his representative in the congress, which leads to lower effort levels, and therefore to smaller weight of the corresponding policy in the party line. The opposite is true in the case of leaders-dominated party. In this case the policy weights are assigned by the party leaders who care about the joint reelection chances of the party's incumbent congress members. The voters therefore have a certain degree of power over the party leadership–their wishes have to be satisfied at least to some extent to guarantee non-zero joint probability of reappointment. The more demanding the voter in a particular district, the greater weight the party leaders assign to a corresponding public policy to ensure at least some chance of winning this district in the coming election.

While the voters apply different reappointment thresholds for different internal structures, in equilibrium all policies are included in the party line with equal weights regardless of the party structure.[1] Indeed, in the case of intra-party democracy, congress members exert equal efforts to bias the party line in favor of their preferred policies, which results in equal policy weights in equilibrium. In the case of leaders-dominated party, the party leadership tries to satisfy somehow voters' wishes in all districts to maximize the joint reelection chances of the party's incumbents, and so finds it optimal to treat all the districts equally. Therefore, whoever determines the party line, the voters are equally well off. However, the final policy outcomes are more likely to pass a tolerant threshold required for the incumbents' reappointment under intra-party democracy rather than a strict threshold required for reappointment under leaders-dominated party structure. So the incumbent congress members have higher chance of being reelected under intra-party democracy, which convinces the party leaders to adopt more inclusive processes for setting the party agenda. Moreover, for the incumbents, the costly effort pays off: the net gain in reelection probability exceeds the effort cost.

I must stress that these results rest on the assumption that party leaders care about joint reelection chances of the party's incumbent congress members. If the party leaders pursue other goals (e.g., particular policy or rent-seeking) they might prefer to have the sole authority to determine the party line rather than adopt democratic decision-making procedures within the party.

The paper borrows from the literature on political agency, starting with the seminal work of Barro (1973) and followed by Ferejohn (1986), Persson et al. (1997), Austen-Smith and Banks (1989), Banks and Sundaram (1993, 1996), and others. In this approach, elections are modeled as a disciplining device. Politicians want to be reelected for another term, and are held accountable for their past performance at the time of election. They therefore have incentives to satisfy the voters' wishes.

The paper is also related to the broad literature on decision making in committees (see Feddersen and Pesendorfer 1998, Austen-Smith and Banks 1996, Persico 2004, Visser and Swank 2007, Levy 2007, among many others). This literature emphasizes the impacts of voting rules on decision making outcomes under various information structures and assumptions about agents' preferences. In contrast with these studies, I focus on the inclusiveness of decision-making processes with emphasis on policy determination procedure.

The remainder of the paper is organized as follows. Section 2 describes the model. Section 3 proceeds with the formal analysis. Finally, Section 4 concludes the paper.

[1] The results are symmetric owing to the symmetry of the problem. In subsection 3.3, I discuss the robustness of the results to non-symmetric specifications of the model.

## 2. Model

Consider a political party that holds a certain number of seats in the congress. I assume, for simplicity, that there are just two congress members affiliated with the political party.[2] The party leadership seeks to maximize the reelection chances of the party's incumbent congress members (like in Fréchette et al. 2008). The party leaders' objective is therefore to maximize the joint probability of partisan congress members being reelected to office:

$$P\left(\cap_{i=1}^{2}\Delta_i\right),$$

where $P$ stands for probability and $\Delta_i$ denotes an event that the party's incumbent congress member $i$ is reelected, $i = 1, 2$.

Congress members affiliated with the political party are assumed to be purely office-motivated, and so maximize their own reelection chances. Congress member $i$'s objective function is

$$P\left(\Delta_i\right).$$

Congress member $i$ represents the interests of her home district $i$. Think of these as local public goods or district-specific public projects. The party line (i.e., the party agenda) specifies which of these district-specific public policies are in the interest of the party. I formalize the party line in terms of weights $s_i \in [0, 1]$, $\sum_{i=1}^{2} s_i = 1$. Weight $s_i$ corresponds to a public policy benefiting partisan district $i$ and reflects the degree of priority of this policy in the party's objectives. In extreme cases, $s_i = 0$ means that the corresponding policy is not included in the party line, while $s_i = 1$ means that it is the party's only objective.

The party leadership might apply different internal procedures to define the party line. In particular, two opposite party structures are considered. Under the first, labeled as leaders' dominance, the party leadership has the sole authority to determine the party line, and so chooses weights $s_i$ to maximize its objective function. In this case, ordinary party members have no power to affect the party agenda. Under the second, labeled as intra-party democracy, ordinary party members have a say in defining the party line. They actually compete to bias the party's objectives in favor of policies, which benefit their home districts. This competition is formalized in terms of the Tullock contest (1980) such that weight $s_i$, which corresponds

[2] An extended version of the model is available upon request, where the number of congress members affiliated with the political party is left unspecified and general. The results of this extended model are qualitatively similar.

to public policy $i$ in the party line, becomes

$$s_i(x_1, x_2) = \begin{cases} \frac{x_i}{\sum_{j=1}^{2} x_j} & \text{if } \max\{x_1, x_2\} > 0, \\ \frac{1}{2} & \text{otherwise,} \end{cases}$$

where $x_i$ denotes an effort congress member $i$ exerts to influence the party line in favor of a public policy benefiting her home district. The set of efforts available to each congress member is taken to be a non-degenerate interval $[0, \overline{x}] \subset \mathbb{R}$ where $\overline{x}$ is large. The cost of the effort of congress member $i$ is linear, $x_i$.[3]

To pass a district-specific public policy in the congress, the party support is to be ensured. Indeed, the more the party members support a particular policy on the floor of the legislature, the more likely this policy is to pass the congress and then to be implemented.[4] I assume that the party support is guaranteed for the policies included in the party line. Moreover, a policy with weight $s_i$ in the party line is assumed to obtain the party support of strength $s_i$.[5] Then implementation of policy $p_i$, which benefits district $i$ only, is determined by the partisan support strength $s_i$ and an independent, unobservable noise $\varepsilon_i$:

$$p_i = s_i^{\alpha} + \varepsilon_i,$$

where $\alpha \in (0, 1)$ and $\varepsilon_i \sim N(0, \sigma^2)$.[6] The noise term $\varepsilon_i$ is meant to represent all other factors apart from the partisan support, which affect passage and implementation of a district-specific public project.[7]

Consider now a representative voter in district $i$, who cares about the implementation of district-specific public policy $p_i$.[8] Only the policy outcome $p_i$ is observed by the voter, not its

[3] The qualitative results of the model hold for a convex cost function. A linear cost function is introduced in order to simplify the algebra.

[4] It is important to point out that success of a particular policy in the legislature is not solely determined by legislative support of members of the corresponding party, but also the congress composition by party and voting patterns of other congress members. I want to concentrate, however, on intra-party rather than inter-party politics, and so focus the model on the party's internal functioning.

[5] I therefore disregard difficulties the party leadership might face while getting the party's congress members to support the party line. The literature on party discipline and cohesion addresses this issue (see, for example, Colomer 2005, Diermeier and Feddersen 1998a, 1998b, Eguia 2011, Iaryczower 2008, McGillivray 1997, Patty 2008, Volden and Bergman 2006, among many others).

[6] The qualitative results of the model hold for a general concave function from $s_i$ to $p_i$. I introduce a functional form $p_i = s_i^{\alpha} + \varepsilon_i$ with $\alpha \in (0, 1)$ as it allows a closed-form solution.

[7] An extended version of the model is available upon request, where the noise term $\varepsilon_i$ follows a single-peaked symmetric distribution with increasing hazard function. The results of this extended model are qualitatively similar.

[8] Since there is no ideological component, it is convenient to consider a single representative voter in each district.

composition between policy weight and noise. The voter realizes that whoever determines $p_i$'s weight in the party line (party leadership in the case of leaders-dominated party or congress member $i$ in the case of intra-party democracy) cares about $i$'s reelection chances, and so can be held accountable for $p_i$'s implementation at the moment of election. The voter is assumed to adopt a cutoff reelection rule: he reappoints an incumbent congress member if policy outcome $p_i$ exceeds a certain threshold, say $\gamma_i \in [0,1]$.[9] Under this reelection rule, event $\Delta_i$ that the party's incumbent congress member $i$ is reelected becomes

$$\Delta_i = \{p_i \geq \gamma_i\} = \{s_i^\alpha + \varepsilon_i \geq \gamma_i\}.$$

The probability of $i$ being reelected is given by

$$P(\Delta_i) = P(\{s_i^\alpha + \varepsilon_i \geq \gamma_i\}) = 1 - F(\gamma_i - s_i^\alpha),$$

where $F$ denotes the normal distribution function. The joint probability of incumbent congress members being reelected to office becomes

$$P\left(\cap_{i=1}^2 \Delta_i\right) = P\left(\cap_{i=1}^2 \{s_i^\alpha + \varepsilon_i \geq \gamma_i\}\right) = (1 - F(\gamma_1 - s_1^\alpha))(1 - F(\gamma_2 - s_2^\alpha)).$$

This is a sequential political agency game between politicians (party leaders and congress members) and representative voters (one in each partisan district). The timing of events is as follows. First, the party leaders decide on the party internal structure: leaders' dominance or intra-party democracy. Second, the representative voter in each partisan district commits to the reelection rule to be used in the coming election, i.e., chooses reelection threshold $\gamma_i$. Third, the party line is defined either by the party leaders (under leaders-dominated party structure) or by the congress members in a competitive contest (under intra-party democracy). Finally, nature chooses noises $\varepsilon_1$ and $\varepsilon_2$, and the policy outcomes $p_1$ and $p_2$ are observed. The election takes place and the representative voter in each district applies the selected reelection rule to reward the incumbent congress member.

I search for a subgame perfect equilibrium by analyzing the game backwards. First, given the party internal structure and reelection thresholds $\gamma_i \in [0,1]$, I examine the choice of the party line. Second, given the party internal structure, I solve for the voters' decision regarding reelection thresholds. Finally, I analyze the party leaders' choice of the party internal structure.

[9] The voter is rational, and so realizes that the expected policy outcome $Ep_i$ will not exceed 1, i.e., $Ep_i \in [0,1]$. It is therefore reasonable to restrict $\gamma_i$'s domain to $[0,1]$ too.

## 3. Analysis

In this section, the game is analyzed backwards to find a subgame perfect equilibrium. I consider the politicians' and voters' decisions under leaders' dominance first, and under intra-party democracy second. I turn then to the party leaders' decision regarding the party internal structure.

### 3.1. Leaders-Dominated Party

Under leaders-dominated party structure, the party leaders have the sole authority to define the party line. Given the reelection rules with thresholds $\gamma_1 \in [0,1]$ and $\gamma_2 \in [0,1]$, the party leadership chooses policy weights $s_1$ and $s_2$ in the party line to maximize its objective function:

$$P\left(\cap_{i=1}^{2}\Delta_i\right) = \left(1 - F\left(\gamma_1 - s_1^{\alpha}\right)\right)\left(1 - F\left(\gamma_2 - s_2^{\alpha}\right)\right)$$

with $s_1 + s_2 = 1$. The party leaders' maximization problem is analyzed in the Appendix. I show that the second-order condition holds for all reelection rules with thresholds $\gamma_1 \in [0,1]$ and $\gamma_2 \in [0,1]$ if variance $\sigma^2$ of the noise satisfies the condition $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$. In what follows, I restrict the space of parameter values to satisfy $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$. Therefore, the equilibrium policy weights in the case of leaders-dominated party, denoted by $s_1^L$ and $s_2^L = 1 - s_1^L$, are implicitly characterized by the first-order condition. The formal result is established in Lemma 1 in the Appendix.

I turn now to the voters' decision regarding reelection thresholds $\gamma_1$ and $\gamma_2$. The representative voter in district $i$ chooses reelection threshold $\gamma_i \in [0,1]$ to maximize expected policy outcome $Ep_i = \left(s_i^L\right)^{\alpha}$. Then maximizing policy weights $s_1^L$ with respect to $\gamma_1$ and $s_2^L$ with respect to $\gamma_2$ yields equilibrium reelection thresholds $\gamma_1^L$ and $\gamma_2^L$ under leaders' dominance. The results are summarized in the following proposition. (Proofs of this and other propositions are given in the Appendix.)

**Proposition 1.** *In the case of leaders-dominated party, the representative voter in district $i$ uses the reelection rule with threshold $\gamma_i^L = 1$, $i = 1, 2$. The equilibrium policy weights, denoted by $s_i^* \equiv s_i^L\left(\gamma_1^L, \gamma_2^L\right)$, are equal to one half: $s_i^* = \frac{1}{2}$. The joint probability of incumbent congress members being reelected to office under leaders' dominance, denoted by $P_L\left(\cap_{i=1}^{2}\Delta_i\right)$, is given by*

$$P_L\left(\cap_{i=1}^{2}\Delta_i\right) = \left(1 - F\left(1 - \frac{1}{2^{\alpha}}\right)\right)^2.$$

According to Proposition 1, under leaders-dominated party structure, the representative voter in district $i$ applies the strictest possible reelection threshold: $\gamma_i^L = 1$. Why does the voter adopt such strict reelection rules? The voter is rational, and so realizes that the party leaders have to satisfy his wishes, at least to some extent. Indeed, the party leadership seeks to maximize the joint reelection chances of the party's incumbent congress members, and so has to please a representative voter in each district somehow. Otherwise, the joint probability of all congress members being reelected drops down sharply. The voters therefore have a certain power over the party leadership–whatever they demand has to be satisfied to some extent to guarantee non-zero joint probability of reelection. Then, the stricter the reelection rule in each district (i.e., the more demanding the voter), the greater weight the party leaders assign to a corresponding policy in the party line to ensure at least some chance of an incumbent being reelected in this district. The voter therefore tends to be as demanding as possible. However, the party leadership is not able to satisfy all voters entirely. Indeed, pleasing the voter in one district implies disappointing the voter in the other district. The party leadership manages to find a compromise, i.e., to satisfy both voters to some extent ensuring some chances of both incumbents being reelected. In equilibrium, all public projects are included in the party line with equal weights, $s_1^* = s_2^* = \frac{1}{2}$. (The policy weights are equal owing to the symmetry of the problem.) The expected policy outcome in district $i$ does not reach the reelection threshold: $Ep_i^* < \gamma_i^L$. As a result, the incumbent congress members are more likely to be thrown out of office. There is, however, some chance of both incumbents getting reelected. This happens when a realization of noise $\varepsilon_i$ is positive and sufficiently large in each district, i.e., $\varepsilon_i \geq \gamma_i^L - Ep_i^*$ for $i = 1, 2$. The probability of this is strictly less than $\frac{1}{4}$, and so is the probability of both incumbents being reelected under leaders' dominance: $P_L\left(\cap_{i=1}^2 \Delta_i\right) < \frac{1}{4}$.

### 3.2. Intra-Party Democracy

In the case of intra-party democracy, congress members define the party line in a competitive contest. Each congress member exerts a costly effort $x_i$ to influence the party line in favor of a public policy benefiting her home district.[10] Given the reelection rules with thresholds $\gamma_i \in [0,1]$, congress member $i$ chooses an effort $x_i \in [0, \overline{x}]$ to maximize her reelection chances net of the effort cost:

$$P(\Delta_i) - x_i = 1 - F(\gamma_i - s_i^\alpha) - x_i = 1 - F\left(\gamma_i - \left(\frac{x_i}{x_i + x_j}\right)^\alpha\right) - x_i,$$

[10] Obviously, $x_1 = x_2 = 0$ is not an equilibrium. Indeed, each congress member would like to deviate and exert a tiny effort to make her favorite policy the party's only objective.

where $i, j = 1, 2,\ i \neq j$. The congress members' maximization problem is analyzed in the Appendix. I show that the second-order conditions hold for all reelection rules with thresholds $\gamma_1 \in [0,1]$ and $\gamma_2 \in [0,1]$ if variance $\sigma^2$ of the noise satisfies the condition $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$, which was assumed to hold in the previous subsection. The congress members' best response functions are therefore characterized by the first-order conditions. I then establish the existence of the congress members' equilibrium efforts $x_1^D$ and $x_2^D$ under the reelection rules with thresholds $\gamma_1 \in [0,1]$ and $\gamma_2 \in [0,1]$ in the case of intra-party democracy. The result is presented in Lemma 2 in the Appendix.

I analyze now the voters' choice of reelection thresholds $\gamma_1$ and $\gamma_2$. Maximizing policy weights $s_1^D \equiv \frac{x_1^D}{x_1^D + x_2^D}$ with respect to $\gamma_1$ and $s_2^D \equiv \frac{x_2^D}{x_1^D + x_2^D}$ with respect to $\gamma_2$ yields equilibrium reelection thresholds $\gamma_1^D$ and $\gamma_2^D$ under intra-party democracy. The results are presented in the following proposition.

**Proposition 2.** *In the case of intra-party democracy, the representative voter in district $i$ uses the reelection rule with threshold $\gamma_i^D = \frac{1}{2^\alpha}$, $i = 1, 2$. The congress members' equilibrium efforts $x_i^{**} \equiv x_i^D\left(\gamma_1^D, \gamma_2^D\right)$ are equal to*

$$x_i^{**} = \frac{\alpha}{\sqrt{2\pi}\sigma 2^{1+\alpha}}.$$

*The equilibrium policy weights, denoted by $s_i^{**} \equiv s_i^D\left(\gamma_1^D, \gamma_2^D\right)$, are equal to one half: $s_i^{**} = \frac{1}{2}$. The joint probability of incumbent congress members being reelected to office under intra-party democracy, denoted by $P_D\left(\cap_{i=1}^2 \Delta_i\right)$, is given by*

$$P_D\left(\cap_{i=1}^2 \Delta_i\right) = \frac{1}{4}.$$

Under intra-party democracy, the voters are not so demanding as under leaders-dominated party structure. Indeed, the equilibrium reelection rules are rather tolerant: $\gamma_i^D = \frac{1}{2^\alpha} < 1$. Intuitively, the voter's goal is to motivate his representative in the congress to exert effort to bias the party line in favor of the voter's preferred public project. If the voter is absolutely not demanding and always reelects the incumbent, the latter has no incentive to work hard in the congress. Then, the more demanding the voter (i.e., the stricter the reelection rules), the more incentives the congress member has to promote the interests of her home district and so the more effort exerts. As a result, the corresponding public policy gets the greater weight in the party line. However, the effort is costly, and so might not pay off under very strict reappointment rules. Indeed, satisfying a very demanding voter becomes too costly for his representative in the congress, which leads to lower effort levels, and therefore to smaller weight of the corresponding policy in the party line. It follows that the policy weight is initially increasing and then decreasing with a reelection threshold applied in the corresponding district. The voter therefore adopts a reelection threshold of intermediate value, which maximizes the weight of his preferred policy in the party line. Thus, under intra-party democracy, the equilibrium reelection rules tend to be less strict than under leaders' dominance. The incumbents can meet the voters' wishes in this case. In equilibrium, all public projects are included in the party line with equal weights and the expected policy outcomes reach the thresholds required for reelection in each district: $Ep_i = \gamma_i^D$. Each incumbent therefore has equal chance of being reelected or thrown out of office. A positive realization of noise $\varepsilon_i$ pushes the policy outcome over the required threshold and therefore implies reelection of the incumbent. In turn, a negative realization of noise drags the policy outcome down and leads to the incumbent's dismissal. The joint probability of both incumbents being reelected, $P_D\left(\cap_{i=1}^2 \Delta_i\right)$, then equals $\frac{1}{4}$.

How do the equilibrium efforts $x_i^{**}$ depend on the values of the parameters? A larger variance $\sigma^2$ of the noise decreases the congress members' efforts. Intuitively, more randomness in the observed policy outcomes $p_i$ makes the reelection probabilities less sensitive to effort, reducing the congress members' incentives. In turn, a larger concavity parameter $\alpha$ increases the congress members' efforts. Indeed, a larger $\alpha$ makes the relationship between policy outcome $p_i$ and corresponding policy weight $s_i$ more linear (and less concave). As a result, the reelection probabilities become more sensitive to effort, increasing the incumbents' incentives.

### 3.3. Choice of the Party Internal Structure

I turn now to the leaders' choice of the party internal structure. The party leadership seeks to maximize the joint reelection chances of the party's incumbent congress members. The joint probability of the incumbents being reelected is higher under intra-party democracy than under leaders' dominance:

$$P_D\left(\cap_{i=1}^2 \Delta_i\right) = \frac{1}{4} > P_L\left(\cap_{i=1}^2 \Delta_i\right),$$

which drives the following result.

**Proposition 3.** *The equilibrium internal procedure to define the party line is intra-party democracy. The equilibrium reelection thresholds, congress members' efforts and policy weights are given in Proposition 2.*

At first glance this result seems counterintuitive. Indeed, why would the party leaders let ordinary members determine the party line instead of choosing it themselves? Intuitively, the party leaders realize that if they were the ones defining the party line, they would face very demanding voters. The voter in each district would actually adopt the strictest possible reelection rule to motivate the party leaders to make his preferred policy the party's only objective. And the party leaders in this case would have to meet the voters' requirements somehow, in order to guarantee some positive chances of the incumbents being reelected in all districts. However, none of the voters could be completely satisfied as all public policies would be included in the party line with equal weights. As a result, the incumbent congress members would be more likely to be thrown out of office rather than reelected. The party leaders therefore prefer to let ordinary members define the party line in a competitive contest, as in this case each congress member has equal chance of being reelected or dismissed. Intuitively, the voters realize that biasing the party line in favor of their preferred policies is costly for the incumbents and might not pay off under very demanding reappointment rules. As a result, the voters are quite tolerant. Satisfying their realistic demands is feasible. In equilibrium, the incumbents exert equal efforts, and so all policies have equal weights in the party line and get equal support on the floor of the legislature. The expected policy outcomes reach the thresholds required for reappointment. The reelection outcome for each incumbent is therefore determined solely by a realization of the noise, and so has equal chance of being favorable or unfavorable. The incumbents are thus more likely to be reelected under intra-party democracy than under leaders-dominated party structure. Moreover, their costly efforts finally pay off. Indeed, the incumbents are better off exerting costly efforts to determine the party line in a competitive contest under intra-party democracy rather than just accepting the agenda of the party leadership under leaders' dominance:

$$P_D\left(\Delta_i\right) - x_i^{**} > P_L\left(\Delta_i\right) \tag{3.1}$$

for the range of parameters of interest, i.e., for $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$ with $\alpha \in (0,1)$. (The proof of this is given in the Appendix.) I must stress that whoever determines the party line (party leadership in the case of leaders-dominated party or congress members in the case of intra-party democracy) assigns the same policy weights in equilibrium. The difference between the two internal procedures is in the equilibrium reappointment rules adopted by the voters, which affect the incumbents' reelection probabilities. So the ordinary party members are better off under intra-party democracy not because of better policy outcomes but just because of less demanding voters. The voters in turn are equally well off regardless of the internal procedure for defining the party line. Indeed, whoever determines the party line, each policy gets the same weight and the same party support:

$$s_i^* = s_i^{**} = \frac{1}{2}.$$

The results presented here are symmetric owing to the symmetry of the problem. The model can be extended to consider agents with non-symmetric preferences and/or cost functions, or to assume non-symmetric relationships between policy weights and corresponding policy outcomes. Such extended model would obviously yield non-symmetric solutions for equilibrium policy weights and reelection thresholds. However, the voters would still be less demanding–and so more likely to reelect incumbents–under intra-party democracy than under leaders' dominance. The main message of the paper would therefore hold unless the party leaders were assumed to pursue other goals or favor a particular public policy rather than to maximize a joint probability of partisan congress members being reelected to office. Indeed, if it were the case, the party leadership would not have to satisfy a representative voter in each district under leaders-dominated party structure.

## 4. Conclusion

This paper has provided a rationale for intra-party democracy within a political agency model with moral hazard. I focus on policy determination procedures within the party and show that democratizing those is in the party's interest. The reason is that under intra-party democracy, the voters adopt less strict reappointment rules and reelect the incumbents more often than under leaders-dominated party structure. The voters realize that very demanding reappointment rules become counterproductive under intra-party democracy, when the congress members exert costly efforts to bias the party line in favor of their home districts. Very strict reappointment requirements demotivate the incumbents to make effort in this case. In contrast, under leaders-dominated party structure, whatever reelection requirements the voters apply will be met to some extent since the party leadership wants to guarantee positive reelection chances of the party's incumbents in all partisan districts. The stricter the reappointment rules in a particular district in this case, the more weight the party leaders assign to the corresponding policy in the party line. Intuitively, the voters then adopt more demanding reappointment rules under leaders' dominance.

I must point out that the paper constitutes a partial attempt to justify intra-party democracy and focuses on a specific game within a political agency framework. It would be of interest to explore different game structures that might reveal further reasons for political parties to adopt more inclusive policy determination processes.

# Appendix

## A. Party Leaders' Maximization Problem under Leaders-Dominated Party Structure

Given reelection thresholds $\gamma_1 \in [0,1]$ and $\gamma_2 \in [0,1]$, the party leaders assign policy weight $s_1$ to maximize

$$P\left(\cap_{i=1}^{2}\Delta_i\right) = \left(1 - F\left(\gamma_1 - s_1^{\alpha}\right)\right)\left(1 - F\left(\gamma_2 - (1-s_1)^{\alpha}\right)\right).$$

The first-order condition with respect to $s_1$ is

$$s_1^{\alpha-1} f\left(\gamma_1 - s_1^{\alpha}\right)\left(1 - F\left(\gamma_2 - (1-s_1)^{\alpha}\right)\right) - (1-s_1)^{\alpha-1} f\left(\gamma_2 - (1-s_1)^{\alpha}\right)\left(1 - F\left(\gamma_1 - s_1^{\alpha}\right)\right) = 0, \tag{A.1}$$

where $f$ denotes the normal probability density function. The second-order condition is

$$\begin{aligned} s_1^{\alpha-2} f\left(\gamma_1 - s_1^{\alpha}\right)\left(1 - F\left(\gamma_2 - (1-s_1)^{\alpha}\right)\right)\left(\alpha - 1 - \alpha s_1^{\alpha}\frac{f'\left(\gamma_1 - s_1^{\alpha}\right)}{f\left(\gamma_1 - s_1^{\alpha}\right)}\right) + \\ (1-s_1)^{\alpha-2} f\left(\gamma_2 - (1-s_1)^{\alpha}\right)\left(1 - F\left(\gamma_1 - s_1^{\alpha}\right)\right)\left(\alpha - 1 - \alpha(1-s_1)^{\alpha}\frac{f'\left(\gamma_2 - (1-s_1)^{\alpha}\right)}{f\left(\gamma_2 - (1-s_1)^{\alpha}\right)}\right) - \\ 2\alpha s_1^{\alpha-1}(1-s_1)^{\alpha-1} f\left(\gamma_1 - s_1^{\alpha}\right) f\left(\gamma_2 - (1-s_1)^{\alpha}\right) < 0. \end{aligned} \tag{A.2}$$

The last term of (A.2) is negative. The signs of the first and second terms are exclusively determined by the signs of

$$\alpha - 1 - \alpha s_1^{\alpha}\frac{f'\left(\gamma_1 - s_1^{\alpha}\right)}{f\left(\gamma_1 - s_1^{\alpha}\right)} = \alpha - 1 + \frac{\alpha}{\sigma^2}s_1^{\alpha}\left(\gamma_1 - s_1^{\alpha}\right) \tag{A.3}$$

and

$$\alpha - 1 - \alpha(1-s_1)^{\alpha}\frac{f'\left(\gamma_2 - (1-s_1)^{\alpha}\right)}{f\left(\gamma_2 - (1-s_1)^{\alpha}\right)} = \alpha - 1 + \frac{\alpha}{\sigma^2}(1-s_1)^{\alpha}\left(\gamma_2 - (1-s_1)^{\alpha}\right), \tag{A.4}$$

respectively. Given $s_1 \in [0,1]$ and $\gamma_1 \in [0,1]$, the maximum of (A.3) is equal to $\alpha - 1 + \frac{\alpha}{4\sigma^2}$, which is negative for $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$. Accordingly, given $s_1 \in [0,1]$ and $\gamma_2 \in [0,1]$, the maximum of (A.4) is equal to $\alpha - 1 + \frac{\alpha}{4\sigma^2}$, which is negative for $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$. I then restrict the space of parameter values to satisfy the condition $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$ to guarantee that the second-order condition (A.2) holds for all $s_1 \in [0,1]$, $\gamma_1 \in [0,1]$ and $\gamma_2 \in [0,1]$. The first-order condition (A.1) therefore characterizes the equilibrium policy weights under leaders' dominance, denoted by $s_1^L$ and $s_2^L = 1 - s_1^L$. The results are summarized in the following lemma.

**Lemma 1.** *Under leaders-dominated party structure, given the reelection rules with thresholds* $\gamma_1 \in [0,1]$ *and* $\gamma_2 \in [0,1]$*, the party leaders assign policy weights* $s_1^L$ *and* $s_2^L = 1 - s_1^L$*, which are implicitly characterized by the first-order condition (A.1).*

Simplifying (A.1) yields an implicit solution for the party leaders' maximization problem:

$$s_1^L = \left( \left( \frac{1 - F\left(\gamma_1 - \left(s_1^L\right)^\alpha\right)}{f\left(\gamma_1 - \left(s_1^L\right)^\alpha\right)} \frac{f\left(\gamma_2 - \left(1 - s_1^L\right)^\alpha\right)}{1 - F\left(\gamma_2 - \left(1 - s_1^L\right)^\alpha\right)} \right)^{\frac{1}{1-\alpha}} + 1 \right)^{-1}. \tag{A.5}$$

■

## B. Proof of Proposition 1

The representative voter in district 1 chooses $\gamma_1 \in [0,1]$ to maximize $s_1^L$, which satisfies (A.5). The voter then chooses $\gamma_1$ to maximize hazard function $\frac{f\left(\gamma_1 - \left(s_1^L\right)^\alpha\right)}{1-F\left(\gamma_1 - \left(s_1^L\right)^\alpha\right)}$ since $s_1^L$ strictly increases with $\frac{f\left(\gamma_1 - \left(s_1^L\right)^\alpha\right)}{1-F\left(\gamma_1 - \left(s_1^L\right)^\alpha\right)}$ for any $\gamma_2 \in [0,1]$. The hazard function of the normal distribution is increasing, i.e., $\frac{d}{dy}\left(\frac{f(y)}{1-F(y)}\right) > 0$. The voter therefore assigns $\gamma_1 \in [0,1]$ to maximize $\gamma_1 - \left(s_1^L\right)^\alpha$, i.e., $\gamma_1^L = 1$, where $\gamma_i^L$ denotes a reelection threshold in district $i$ under leaders' dominance.

By analogy, the representative voter in district 2 chooses $\gamma_2 \in [0,1]$ to maximize $s_2^L = 1 - s_1^L$, where $s_1^L$ satisfies (A.5). The voter then chooses $\gamma_2$ to maximize hazard function $\frac{f\left(\gamma_2 - \left(1 - s_1^L\right)^\alpha\right)}{1-F\left(\gamma_2 - \left(1 - s_1^L\right)^\alpha\right)}$ as $s_2^L = 1 - s_1^L$ strictly increases with $\frac{f\left(\gamma_2 - \left(1 - s_1^L\right)^\alpha\right)}{1-F\left(\gamma_2 - \left(1 - s_1^L\right)^\alpha\right)}$ for any $\gamma_1 \in [0,1]$. Since for the normal distribution $\frac{d}{dy}\left(\frac{f(y)}{1-F(y)}\right) > 0$, the voter in district 2 chooses $\gamma_2^L = 1$, which maximizes $\gamma_2 - \left(1 - s_1^L\right)^\alpha$.

Plugging $\gamma_1^L = 1$ and $\gamma_2^L = 1$ in (A.5) yields an implicit solution for the equilibrium policy weights in the case of leaders-dominated party, denoted by $s_1^*$ and $s_2^* = 1 - s_1^*$:

$$s_1^* = \left( \left( \frac{1 - F\left(1 - (s_1^*)^\alpha\right)}{f\left(1 - (s_1^*)^\alpha\right)} \frac{f\left(1 - (1 - s_1^*)^\alpha\right)}{1 - F\left(1 - (1 - s_1^*)^\alpha\right)} \right)^{\frac{1}{1-\alpha}} + 1 \right)^{-1}. \tag{B.1}$$

Solving (B.1) for $s_1^* \in [0,1]$ yields a unique equilibrium $s_1^* = \frac{1}{2}$, $s_2^* = \frac{1}{2}$. I prove this by contradiction. Indeed, if $s_1^* > \frac{1}{2}$ then $1 - (1 - s_1^*)^\alpha > 1 - (s_1^*)^\alpha$, which implies that $\frac{f\left(1-\left(1-s_1^*\right)^\alpha\right)}{1-F\left(1-\left(1-s_1^*\right)^\alpha\right)} > \frac{f\left(1-\left(s_1^*\right)^\alpha\right)}{1-F\left(1-\left(s_1^*\right)^\alpha\right)}$ since the hazard function of the normal distribution is increasing. Then the right-hand side of (B.1) is inferior to $\frac{1}{2}$ for all $\alpha \in (0,1)$, which means that $s_1^* < \frac{1}{2}$ and contradicts the initial assumption $s_1^* > \frac{1}{2}$. So the initial assumption $s_1^* > \frac{1}{2}$ must be false. Assume now that $s_1^* < \frac{1}{2}$. Then, by analogy, one can show that the right-hand side of (B.1) is superior to $\frac{1}{2}$ for all $\alpha \in (0,1)$, which contradicts $s_1^* < \frac{1}{2}$. It follows then that the assumption $s_1^* < \frac{1}{2}$ must be false, and $s_1^* = \frac{1}{2}$, $s_2^* = \frac{1}{2}$ are the equilibrium policy weights under leaders-dominated party structure. The joint probability of incumbent congress members being reelected to office, denoted by $P_L\left(\cap_{i=1}^2 \Delta_i\right)$, is equal to

$$P_L\left(\cap_{i=1}^2 \Delta_i\right) = \left(1 - F\left(\gamma_1^L - (s_1^*)^\alpha\right)\right)\left(1 - F\left(\gamma_2^L - (s_2^*)^\alpha\right)\right) = \left(1 - F\left(1 - \frac{1}{2^\alpha}\right)\right)^2.$$

■

## C. Congress Members' Maximization Problem under Intra-Party Democracy

Given reelection threshold $\gamma_i \in [0,1]$, congress member $i$ exerts effort $x_i$ to maximize

$$P(\Delta_i) - x_i = 1 - F\left(\gamma_i - \left(\frac{x_i}{x_i + x_j}\right)^\alpha\right) - x_i.$$

The first-order condition with respect to $x_i$ is

$$\alpha f\left(\gamma_i - \left(\frac{x_i}{x_i + x_j}\right)^\alpha\right)\left(\frac{x_i}{x_i + x_j}\right)^{\alpha-1}\frac{x_j}{(x_i + x_j)^2} - 1 = 0. \tag{C.1}$$

The second-order condition is

$$f\left(\gamma_i - \left(\frac{x_i}{x_i + x_j}\right)^\alpha\right)\left(\frac{x_i}{x_i + x_j}\right)^{\alpha-2}\frac{x_j^2}{(x_i + x_j)^4}\left(\alpha - 1 - \alpha\left(\frac{x_i}{x_i + x_j}\right)^\alpha \frac{f'\left(\gamma_i - \left(\frac{x_i}{x_i+x_j}\right)^\alpha\right)}{f\left(\gamma_i - \left(\frac{x_i}{x_i+x_j}\right)^\alpha\right)}\right) - 2\left(\frac{x_i}{x_i + x_j}\right)^{\alpha-1}\frac{x_j}{(x_i + x_j)^3} f\left(\gamma_i - \left(\frac{x_i}{x_i + x_j}\right)^\alpha\right) < 0. \tag{C.2}$$

The last term of (C.2) is negative. The sign of the first term is exclusively determined by the sign of

$$\alpha - 1 - \alpha\left(\frac{x_i}{x_i + x_j}\right)^\alpha \frac{f'\left(\gamma_i - \left(\frac{x_i}{x_i+x_j}\right)^\alpha\right)}{f\left(\gamma_i - \left(\frac{x_i}{x_i+x_j}\right)^\alpha\right)} = \alpha - 1 + \frac{\alpha}{\sigma^2}\left(\frac{x_i}{x_i + x_j}\right)^\alpha\left(\gamma_i - \left(\frac{x_i}{x_i + x_j}\right)^\alpha\right). \tag{C.3}$$

Given $\gamma_i \in [0,1]$ and $x_i, x_j \in [0, \overline{x}]$ such that $\max\{x_i, x_j\} > 0$, the maximum of (C.3) is equal to $\alpha - 1 + \frac{\alpha}{4\sigma^2}$, which is negative for $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$. Therefore the second-order condition (C.2) holds for all $\gamma_i \in [0,1]$ and $x_i, x_j \in [0, \overline{x}]$ such that $\max\{x_i, x_j\} > 0$.

The assumption that the upper bound of the set of efforts, $\overline{x}$, is large guarantees that the best response functions are characterized by the first-order conditions (C.1). The congress members' best response functions are continuous functions from $[0, \overline{x}]$ into itself, where $[0, \overline{x}]$ is a nonempty, compact, convex set. The standard existence results can therefore be applied to establish the following lemma.

**Lemma 2.** *Under intra-party democracy, given the reelection rules with thresholds* $\gamma_1 \in [0,1]$ *and* $\gamma_2 \in [0,1]$*, there exists an equilibrium profile* $\left(x_1^D, x_2^D\right)$ *characterized by the first-order conditions (C.1).*

Dividing the first-order condition of congress member $j$'s problem by that of congress member $i$'s problem and simplifying yields

$$\frac{x_j^D}{x_i^D} = \left(\frac{f\left(\gamma_j - \left(\frac{x_j^D}{x_i^D+x_j^D}\right)^\alpha\right)}{f\left(\gamma_i - \left(\frac{x_i^D}{x_i^D+x_j^D}\right)^\alpha\right)}\right)^{\frac{1}{2-\alpha}}. \tag{C.4}$$

■

## D. Proof of Proposition 2

The representative voter in district $i$ chooses $\gamma_i \in [0,1]$ to maximize policy weight $s_i^D \equiv \frac{x_i^D}{x_i^D+x_j^D}$, where $x_i^D$ and $x_j^D$ satisfy (C.4), $i,j = 1,2$, $i \neq j$:

$$s_i^D = \left(\frac{x_j^D}{x_i^D} + 1\right)^{-1} = \left(\left(\frac{f\left(\gamma_j - \left(s_j^D\right)^\alpha\right)}{f\left(\gamma_i - \left(s_i^D\right)^\alpha\right)}\right)^{\frac{1}{2-\alpha}} + 1\right)^{-1}. \tag{D.1}$$

The voter then chooses $\gamma_i$ to maximize density function $f\left(\gamma_i - \left(s_i^D\right)^\alpha\right)$ since $s_i^D$ strictly increases with $f\left(\gamma_i - \left(s_i^D\right)^\alpha\right)$ for any $\gamma_j \in [0,1]$. The normal probability density function is maximized in its mean, i.e., in 0. The voter therefore chooses

$$\gamma_i^D = \left(s_i^D\right)^\alpha, \tag{D.2}$$

where $\gamma_i^D$ denotes a reelection threshold in district $i$ under intra-party democracy. Substituting (D.2) into (D.1) yields the equilibrium policy weights under intra-party democracy, denoted by $s_i^{**}$:

$$s_i^{**} \equiv s_i^D\left(\gamma_i^D, \gamma_j^D\right) = \left(\left(\frac{f(0)}{f(0)}\right)^{\frac{1}{2-\alpha}} + 1\right)^{-1} = \frac{1}{2}.$$

The equilibrium reelection threshold therefore becomes

$$\gamma_i^D = \frac{1}{2^\alpha}.$$

The joint probability of incumbent congress members being reelected to office, denoted by $P_D\left(\cap_{i=1}^2 \Delta_i\right)$, is equal to

$$P_D\left(\cap_{i=1}^2 \Delta_i\right) = \left(1 - F\left(\gamma_1^D - \left(s_1^{**}\right)^\alpha\right)\right)\left(1 - F\left(\gamma_2^D - \left(s_2^{**}\right)^\alpha\right)\right) = \left(1 - F(0)\right)^2 = \frac{1}{4}.$$

Substituting equilibrium thresholds $\gamma_i^D$ into the first-order conditions (C.1) yields congress members' equilibrium efforts under intra-party democracy, denoted by $x_i^{**}$, $i = 1, 2$:

$$x_i^{**} \equiv x_i^D\left(\gamma_1^D, \gamma_2^D\right) = \frac{\alpha}{\sqrt{2\pi}\sigma 2^{1+\alpha}}.$$

Finally, the participation constraints of the congress members are satisfied: $\frac{1}{2} - x_i^{**} \geq 0$ for $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$. ■

## E. Proof of (3.1)

In the case of intra-party democracy, the incumbent's utility is given by her reelection probability net of effort cost:

$$P_D\left(\Delta_i\right) - x_i^{**} = \frac{1}{2} - \frac{\alpha}{\sqrt{2\pi}\sigma 2^{1+\alpha}}.$$

In the case of leaders-dominated party, the incumbent's utility is just her reelection probability:

$$P_L\left(\Delta_i\right) = 1 - F\left(1 - \frac{1}{2^\alpha}\right).$$

I consider the difference between the two and show that it is strictly positive for the range of parameters of interest, i.e., for $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$ with $\alpha \in (0, 1)$. Indeed,

$$P_D\left(\Delta_i\right) - x_i^{**} - P_L\left(\Delta_i\right) = -\frac{1}{2} - \frac{\alpha}{\sqrt{2\pi}\sigma 2^{1+\alpha}} + F\left(1 - \frac{1}{2^\alpha}\right),$$

which is a continuous function of $\alpha$. Derivating with respect to $\alpha$ yields

$$\frac{\partial}{\partial\alpha}\left(P_D\left(\Delta_i\right) - x_i^{**} - P_L\left(\Delta_i\right)\right) = \frac{1}{\sqrt{2\pi}\sigma 2^{1+\alpha}}\left(-1 + \alpha\ln 2 + e^{-\frac{\left(1-\frac{1}{2^\alpha}\right)^2}{2\sigma^2}}\ln 4\right),$$

which is strictly positive for $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$ with $\alpha \in (0, 1)$. Moreover, evaluating $P_D\left(\Delta_i\right) - x_i^{**} - P_L\left(\Delta_i\right)$ in $\alpha = 0$ yields 0. It follows that for any $\sigma$ from the range of parameters of interest, $P_D\left(\Delta_i\right) - x_i^{**} - P_L\left(\Delta_i\right)$ increases with $\alpha$ and takes the value of 0 for $\alpha = 0$. Therefore,

$$P_D\left(\Delta_i\right) - x_i^{**} - P_L\left(\Delta_i\right) > 0$$

for $\alpha \in (0, 1)$ and $\sigma^2 > \frac{\alpha}{4(1-\alpha)}$. ■

## References


[1] Adams, James, and Samuel Merrill, III, 2008. "Candidate and Party Strategies in Two-Stage Elections Beginning with a Primary," *American Journal of Political Science*, 52, 344-359.

[2] Austen-Smith, David, and Jeffrey S. Banks, 1989. "Electoral Accountability and Incumbency," in P. C. Ordeshook, ed., *Models of Strategic Choice in Politics*. Ann Arbor MI: University of Michigan Press.

[3] Austen-Smith, David, and Jeffrey S. Banks, 1996. "Information Aggregation, Rationality, and the Condorcet Jury Theorem," *American Political Science Review*, 90, 34-45.

[4] Banks, Jeffrey S., and Rangarajan K. Sundaram, 1993. "Adverse Selection and Moral Hazard in a Repeated Elections Model," in W. Barnett, M. Hinich, and N. Schofield, ed., *Political Economy: Institutions, Information, Competition and Representation*. New York: Cambridge University Press.

[5] Banks, Jeffrey S., and Rangarajan K. Sundaram, 1996. "Electoral Accountability and Selection Effects," University of Rochester, mimeo.

[6] Barro, Robert, 1973. "The Control of Politicians: An Economic Model," *Public Choice*, 14, 19-42.

[7] Castanheira, Micael, Benoît S Y Crutzen, Nicolas Sahuguet, 2012. "The Impact of Party Organization on Electoral Outcomes," *Revue Economique*, forthcoming.

[8] Colomer, Josep M., 2005. "Policy Making in Divided Government: A Pivotal Actors Model with Party Discipline," *Public Choice*, 125, 247-269.

[9] Diermeier, Daniel, and Timothy J. Feddersen, 1998a. "Cohesion in Legislatures and the Vote of Confidence Procedure," *American Political Science Review*, 92, 611-621.

[10] Diermeier, Daniel, and Timothy J. Feddersen, 1998b. "Comparing Constitutions: Cohesion and Distribution in Legislatures," *European Economic Review*, 42, 665-672.

[11] Duverger, Maurice, 1964. *Political Parties: Their Organization and Activity in the Modern State*. Cambridge: Cambridge University Press.

[12] Eguia, Jon X., 2011. "Voting Blocs, Party Discipline and Party Formation," *Games and Economic Behavior*, 73, 111-135.

[13] Feddersen, Timothy, and Wolfgang Pesendorfer, 1998. "Convicting the Innocent: The Inferiority of Unanimous Jury Verdicts under Strategic Voting," *American Political Science Review*, 92, 23-35.

[14] Ferejohn, John, 1986. "Incumbent Performance and Electoral Control," *Public Choice*, 50, 5-26.

[15] Fréchette, Guillaume R., Francois Maniquet, and Massimo Morelli, 2008. "Incumbents' Interests and Gender Quotas," *American Journal of Political Science*, 52, 891-909.

[16] Hazan, Reuven Y., and Gideon Rahat, 2010. *Democracy Within Parties: Candidate Selection Methods and their Political Consequences*. Oxford: Oxford University Press.

[17] Iaryczower, Matias, 2008. "Contestable Leadership: Party Leaders as Principals and Agents," *Quarterly Journal of Political Science*, 3, 203-225.

[18] Jackson, Matthew O., Laurent Mathevet, and Kyle Mattes, 2007. "Nomination Processes and Policy Outcomes," *Quarterly Journal of Political Science*, 2, 67-94.

[19] Katz, Richard, and Peter Mair, 2002. "The Ascendancy of the Party in Public Office: Party Organizational Changes in Twentieth-Century Democracies," in Richard Gunther, Jose Ramon Montero, and Juan J. Linz, ed., *Political Parties: Old Concepts and New Challenges*. Oxford: Oxford University Press.

[20] Kirchheimer, Otto, 1966."The transformation of the Western European party systems," in Joseph LaPalombara, and Myron Weiner, ed., *Political Parties and Political Development.* Princeton: Princeton University Press.

[21] Levy, Gilat, 2007. "Decision Making in Committees: Transparency, Reputation, and Voting Rules," *American Economic Review*, 97, 150-168.

[22] McGillivray, Fiona, 1997. "Party Discipline as a Determinant of the Endogenous Formation of Tariffs," *American Journal of Political Science*, 41, 584-607.

[23] Meirowitz, Adam, 2005. "Informational Party Primaries and Strategic Ambiguity," *Journal of Theoretical Politics*, 17, 107-136.

[24] Michels, Robert, 1915. *Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy*. New York: The Free Press.

[25] Patty, John W., 2008. "Equilibrium Party Government," *American Journal of Political Science*, 52, 636-655.

[26] Persico, Nicola, 2004. "Committee Design with Endogenous Information," *Review of Economic Studies*, 71, 165-191.

[27] Persson, Torsten, Gérard Roland, and Guido Tabellini, 1997. "Separation of Powers and Political Accountability," *Quarterly Journal of Economics*, 112, 1163-1202.

[28] Scarrow, Susan, 1999. "Parties and the Expansion of Direct Democracy : Who Benefits?" *Party Politics*, 5, 341-362.

[29] Scarrow, Susan, 2005. *Political Parties and Democracy in Theoretical and Practical Perspectives: Implementing Intra-Party Democracy*. Washington: National Democratic Institute for International Affairs.

[30] Schattschneider, Elmer Eric, 1942. *Party Government*. New York, Farrar & Rinehart, Inc.

[31] Serra, Gilles, 2011. "Why Primaries? The Party's Tradeoff between Policy and Valence," *Journal of Theoretical Politics*, 23, 21-51.

[32] Teorell, Jan, 1999. "A Deliberative Defence of Intra-Party Democracy," *Party Politics*, 5, 363-382.

[33] Tullock, Gordon, 1980. "Efficient Rent Seeking," in James Buchanan, Roger Tollison, and Gordon Tullock, ed., *Towards a Theory of the Rent-Seeking Society*. Texas A&M University Press, College Station, Texas.

[34] Visser, Bauke, and Otto H. Swank, 2007. "On Committees of Experts," *Quarterly Journal of Economics*, 122, 337-372.

[35] Volden, Craig, and Elizabeth Bergman, 2006. "How Strong Should Our Party Be? Party Member Preferences Over Party Cohesion," *Legislative Studies Quarterly*, XXXI, 71-104.