Delegation and Recruitment in Organizations: The Slippery Slope to "Bad" Leadership*

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Abstract

We construct a dynamic model of two-sided sorting in labor markets with multi-dimensional agent and firm heterogeneity. We apply it to study optimal party structure and the decision of how (de)centralized candidate recruitment should be. Parties are non-unitary actors and compete at the *local* markets over recruitment of competent candidates and local organizers possess an informational advantage over the distribution of politicians' skill, which is positively related to electoral rent generation. Party leadership has a dual objective: they want simultaneously to maximize a) the organization's rents and b) their retention probability. Thus, when deciding how centralized recruiting should be, leaders face a trade-off: while delegating candidate selection to local party organizations might increase the party's electoral returns, it also limits a leader's ability to stack the organization with loyalists who are more likely to retain her when she faces a (stochastic) leadership challenge. We characterize an equilibrium delegation rule with two key properties: a) some high-skilled politicians may select into lower performing parties due to ideological alignment, and b) more *extreme* and *incompetent* leaders delegate less and as a result, survive longer at the helm of a shrinking party. Thus, our findings highlight the slippery slope to authoritarian and persistently "bad" leadership. Our model can be applied to other labor recruitment settings.

JEL codes: D72, D73, D83, J40, M51
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1 Introduction

In a representative democracy, the nature and quality of political selection is of fundamental importance. The quality of politicians has attracted a great deal of scholarly attention (Besley (2005); Dal Bó and Finan (2018)), under the premise that better political selection improves the quality of government. Indeed, a large set of literature shows that decision-makers –from executives to individual members of legislatures– can influence the outcomes of policy-making.[1]

From a theoretical perspective, many authors have modeled political selection processes as a result of self-selection by candidates and screening by voters (Besley (2004); Caselli and Morelli (2004); Poutvaara and Takalo (2007); Mattozzi and Merlo (2008); Smart and Sturm (2013)). However, in a representative democracy, political parties also play a consequential role: they are at the core of citizens' representation because they manage the political selection process across various channels. Political parties have gate keeping powers over candidate selection, and parties can either directly – through mechanisms such as list ranks in a closed-list PR system– or indirectly –through, for instance, campaign contributions– influence the electoral prospects of those candidates. Thus, the quality of democratic output depends on how a party choose to structure and organize itself internally. Accordingly, there are also formal models that bring in political parties that are strategic in candidate selection (Carrillo and Mariotti (2001); Mattozzi and Merlo (2015); Galasso and Nannicini (2017)). One take-away from these approaches to political

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[1]A large empirical literature inspired by the citizen-candidate models of Osborne and Slivinski (1996) and Besley and Coate (1997) has demonstrated how politicians' characteristics matter for policy. Studies concern, for example, the causal effects of political partisanship (Lee et al. (2004)), female representation (Chattopadhyay and Duflo (2004); Clots-Figueras (2012)), minority representation (Pande (2003)), and politicians' occupational background (Hyytinen et al. (2018); Kirkland (2020)), and politicians competence (Meriläinen (2022)) on policy outcomes.

selection is that positive selection is far from obvious; for instance, less competent individuals might have a comparative advantage at entering politics due to weaker outside options or parties preferring less costly mediocre candidates. However, to our knowledge, the formal theoretical literature has been silent about the role of internal organization and rules that parties have in political selection.

In this type of framework, political parties have a consequential role: they are at the heart of citizens' representation because they manage the selection process. But, just like any other complex organization, parties are structured internally around some rules –in other words, they have an intraparty constitution. In turn, a party's internal structure will also determine the selection process. The decision of whom to select to represent a political organization can be made centrally or downstream. Hence, an important –yet unanswered question– remains: how are such rules chosen and why? Which entity within a party gets to decide the process that governs political selection? In the spirit of Barbera and Jackson (2004), we are interested in the positive characterization of intraparty constitutional arrangements.

We understand constitutions as a set of rules that govern the allocation of decision-making power among the members of an organization –such as a political party. To put it simply, the intraparty constitution determines the degree of power-sharing (see e.g., Cakir (2019); Dewan et al. (2015); Acemoglu and Robinson (2020)) between the members of the political organization. Thus, a more inclusive constitution will entail more power-sharing and a larger percentage of decisions delegated downstream (Invernizzi and Prato (2019)). This is what interest us: what is the optimal degree of intraparty delegation in decision-making processes? How much power would leaders delegate to downstream party members when it

comes to political selection?

Our second question is normative in nature. That is, we are also interested in the welfare implications of delegation, leading us to question whether intraparty power-sharing is good or bad for political selection. In other words, do 'inclusive' parties with higher degrees of power-sharing (i.e., parties that delegate more) select higher quality politicians? What is the relationship between intraparty democracy and the quality of democratic representation? As numerous cases demonstrate, this also matters for the overall quality of a democratic polity. For instance, a more decentralized candidate selection process might make it easier for a party's legislators to replace an incompetent or authoritarian leader.[2]

To address these questions we build a dynamic model of two-sided candidate recruitment and we endogenize the leader's choice of how (de)centralized the selection process should be. A leader cares both about maximizing her survival chances (her retention probability should an intraparty challenge be staged), as well as, about party electoral success because it reduces the probability of a leadership challenge occurring. These, in turn, depend on the type and characteristics, such as competence and loyalty, of the selected politicians/candidates. However, there is an apparent tension: selecting purely based on a candidate's competence increases the chances of electoral success but also relinquishes control over the identity/loyalty of the political personnel that is recruited.

We model the process of intraparty selection as follows. The *party leader* wants to maximize her chances of staying in power, but, to some degree, this also depends on making the right decisions in terms of selecting the party's political personnel

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[2]For example, recently in the UK both major political parties have replaced their leaders following motions of no-confidence by their MPs.

that maximize the party's rents and probability of electoral success. Moreover, parties compete with each other over recruiting the most talented politicians. In turn, 'regular' politicians (that is, politicians who are not parachuted to the list by a leader) also care about maximizing their (and consequently their party's) re-election prospects, but they also put some weight in their ideological match with a given leader. Thus, they face a choice over which party to join. In other words, the recruitment of political talent is a two-sided matching process, which we explicitly model.

Our model unearths a key trade-off involved in deciding whether to organize the selection process in a more decentralized manner. Since local party organizations hold an informational advantage over candidate recruitment, more delegation increases the chances of electoral success, which is positively related to the leader's survival. At the same time, however, increased delegation also increases the leader's probability of being replaced since there will be fewer loyalists among party ranks when a (stochastic) challenge arrives. In other words, delegating effective control, or real authority, over the party's selection and recruitment decisions is a double-edged sword: it helps the leader to reap the informational advantage at the cost of relinquishing party control. The latter echoes –albeit in a different setting– Aghion and Tirole (1997) who link the delegation of real authority in organizations with the structure of information. As a result, and due to its general nature, our model also speaks to similar recruitment and personnel sorting problems outside the realm of politics, as we discuss later in this paper.

Our main finding is that, in equilibrium, the degree of intraparty decentralization (delegation) increases with a leader's *competence* and ideological *moderation*. In other words, more extremist and less competent leaders delegate less out of

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choice not because of a character trait (although we find that incompetence is relatively a bigger drag). This result offers several insights into the relationship between intraparty constitutional arrangements and the quality of political representation, as well as into democratic politics in general. First, we provide a rational choice-based explanation of the link between authoritarian, non-inclusive leaders and ideological extremism. Extreme centralization of intraparty power, rather than mostly being a 'character' or psychological attribute of ideological extremist leaders, is predominantly a *strategic choice* made by them. Thus, our work offers a possible link to endogenize the relationship between ideological extremism and authoritarianism.

Second, we find that parties led by authoritarian leaders dynamically shrink over time because they over-recruit from the pool of (and fill the organization ranks with) less competent candidates (workers) and, hence, in expectation reduce the party's rent-generation ability and total assets while simultaneously increasing the leader's own survival probability. The latter observation also points to an interesting feature of intraparty politics that we refer to as the 'slippery slope' of intraparty democratic processes. This feature describes the idea that competent, or moderate, leaders are likely to be replaced more frequently because they are more likely to relinquish control over the party. That is, 'good' leaders fall victims to their tendency to delegate, leading them to delegate much more, in equilibrium. This novel insight, that comes from opening the black box of intraparty politics and selection (Dal Bó and Finan (2018)), is in our view another manifestation of the general idea of the 'narrow corridor' of democratic politics (see Acemoglu and Robinson (2020)) applied within a political organization.

The rest of the paper is organized as follows. In section 2, we present our

paper's main contributions and its connection to the literature. Section 3 presents the key ingredients of our model, while section 4 presents our main results and comparative statics. Section 5 concludes.

2 Contribution and Relation to Literature

By providing a tractable dynamic model of two-sided matching, we highlight the presence of a key trade-off between ideological match (similar to product homogeneity) and competence –for a regular politician– on the one hand and for party (organizational) success on the other, which we model as maximizing the probability of collecting rents. The insight we gain by exposing this trade-off is that there exists a tension between organizational and individual (leader or politician) success in terms of rents/wages collected. This tension gets amplified by multi-dimensional agent heterogeneity and the stochastic, uncertain nature of the leader's survival at the helm of the party. Given how general in nature the above is, it can be readily applied to various other economic settings, such as sorting in the labor market, where these type of trade-offs are present. Thus, our work contributes to the following strands of literature.

First, we contribute to the burgeoning literature on intraparty politics and the role that parties play in the process of candidate selection (see e.g., Dal Bó and Finan (2018)).[3] Here, our contribution is twofold. First, we advance the literature by explicitly modelling how the choice of internal party rules and constitutions (selection/delegation rules) map into candidate selection and party success. To

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[3]There are a few recent advances in the literature exploring the role of intraparty dynamics (see e.g., Cakir (2019); Buisseret et al. (2022); Matakos et al. (2018)) on political selection but from a different angle. Importantly, they do not endogenize the choice of the selection rule.

our knowledge, this is the first paper that endogenizes the choice of a political organization's personnel recruitment procedures. Second, we formally model both dimensions of competition (within and between parties) that political organizations engage with. To achieve this, we model the selection process as a two-sided matching market, and we derive analytical solutions. This adds additional complexity to the model, but in return, we gain useful insights that relate to the 'narrow corridor' of intraparty democracy and the strategic, non-idiosyncratic link between authoritarianism and ideological extremism. This is a new insight in the study of intraparty politics. What is more, our theoretical results are consistent with recent empirical studies of populism, which find that while populism has large economic costs, populist leaders can nonetheless be long-lasting (see e.g., Funke et al. (2020)). This is another way of understanding our model's equilibrium where extremist and incompetent leaders survive longer.

Furthermore, due to our choice to explicitly model the political selection process as a two-sided competitive market, we can isolate and focus on the influence that between-party competition exerts in political selection. The insight we gain from this is that relatively more competent and moderate party leaders *double-down on decentralization* and relinquish party control to local party organizations in order to attract better political talent and thus improve the party's election prospect. The latter comes at the cost of party leaders being replaced more often, should a challenge arise, since these leaders lack loyal, hand-picked allies among party ranks.

Second, our work contributes to the literature on organizational theory in bureaucracies. We endogenize the choice of the optimal structure of the organization –in our case, how decentralized decision-making should be and the optimal degree

of downstream delegation of decision-making. In this sense, our work extends recent advances on understanding state bureaucratic organizations by Dal Bó et al. (2021) in a more complex setting since, unlike state bureaucratic organizations, parties operate in an environment of both vertical (within) and horizontal (between) competition. In a different direction, it also extends work by Dewan et al. (2015) who explore how ideology and information aggregation technology affect optimal centralization of authority in executive decision-making and its impact on policy quality. Our work also has important implications for span-of-control literature (see e.g., Bandiera et al. (2021); Eeckhout and Kircher (2012); Akcigit et al. (2018); Aghion and Tirole (1997)) and the incentives that managers and CEOs face in allocating authority and control over key organizational decisions, such as personnel recruitment or monitoring.

Finally, our work has broader theoretical implications for models studying the labor market and the optimal sorting of heterogeneous workers into heterogeneous firms (see Roth and Sotomayor (1992) for a discussion on the tension between centralized and decentralized matching in such markets). The majority of the literature analyzes the effect of production technology on sorting patterns of workers of heterogeneous abilities into firms of heterogeneous productivities (see Chade et al. (2017) and Eeckhout (2018) for recent surveys). While a few other papers (Lindenlaub (2017)) have studied sorting decisions with *multi-dimensional agent heterogeneity*, our paper extends this work in two directions. First, we model explicitly the firm's (party's) production (rent generation) function. Second, by opening the black box of intra-organizational structure, we model heterogeneity across the different tiers –local vs. executive leadership– of firm management. Thus, we offer a richer set-up to study firms' recruitment and production deci-

sions. The benefit from having a richer, more complex set-up is the ability to understand how an organization's decisions regarding its internal structure map into its personnel quality and overall profitability. This is, to our knowledge, a wholly new insight that we gain from our framework. While political parties are ideal organizations to study these interactions, our model and its insights readily apply to any organization that is characterized by multi-layer heterogeneity.

In particular, our work has many applications to cases where firms can have two or more dimensions of heterogeneity (e.g., corporate culture/mission[4] and managerial capacity). It can also easily be extended into a third dimension of heterogeneity in which firms and organizations also differ in their productivity.[5] In our case, for example, just like parties can be ideologically moderate or extreme, firms can be more or less concerned about their corporate ethics (e.g., social responsibility, environmental imprint, or a strong stance against discrimination and harassment). In turn, workers can have heterogeneous values for different types of firms. As long as these 'more intensely concerned' agents are a minority overall, then our theoretical framework could thus be readily applied, for instance, to firms with and without environmental concerns. Our findings can explain why we see some high-productivity workers in environmentally concerned firms, even though these firms do not pay as much. Similarly, it could explain why some very productive, highly skilled workers choose to work for the not-for-profit sector at lower salaries, or are willing to accept a salary penalty in order to avoid working for a firm that

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[4]Examples of corporate culture can include the degree of tolerance towards sexual or racial harassment/discrimination practices, environmental concerns, social corporate responsibility, and tax compliance practices, among other characteristics.

[5]An interesting feature of our two-sided labor market sorting model is that the workers' (politicians') wages are *endogenously* determined and depend on agents' recruitment decisions. Moreover, wages are purely performance-related.

is considered to be 'soft' on tackling sexual harassment and discrimination (e.g., Folke and Rickne (2022)).

In sum, our model brings to the surface a feature of labor market sorting: the equilibrium behavior of workers (politicians) that sort into firms (parties) with lower expected assets. This feature can be applied to multiple contexts. Furthermore, our work moves one step further and provides not only a comprehensive theoretical framework for conceptualizing and measuring such trade-offs faced by workers but also identifies how these decisions affect a firm's *personnel quality*, managerial turnover, and *overall profitability*.[6]

3   Model

This section develops a dynamic model to study the trade-offs a party leader faces when deciding how much to delegate the selection of candidates to downstream party organizations. While choosing how much to delegate, a leader aims to meet her dual goals of maximizing the party's electoral success while maintaining her control over the party (i.e., maximizing her retention/survival probability). Delegating candidate recruitment to local party organizations potentially creates a conflict between achieving these dual objectives. When she delegates, the local organizations use their superior information of the local market to find the most competent candidates to maximize the party's electoral success. On the other hand, such competent candidates may abandon the leader when a challenger runs for party leadership. Inter-party competition at the local level affects this calculus:

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[6]For example, a testable implication of our model in the context of Folke and Rickne (2022) who find that workers are willing to accept a salary penalty in order to sort into a firm whose executive leaders actively combat sexual harassment would be that managerial turnover occurs less frequently in such firms, even if firm profitability is lower.

local party organizations may well know who the most competent politicians are but they get only what they can. That is, the most competent ones may prefer other parties.

The model demonstrates a trait that we label the 'fragility of democratic politics'. Less competent and more extremist leaders tend to stay in the helm for a longer time because they fill the party with their loyalists to minimize the risk of losing leadership. As a result, the average quality of party members deteriorates, and the party shrinks. On the other hand, more moderate and competent politicians leave candidate selection to knowledgeable (local) party authorities. By doing this, they allow their parties to prosper with high-quality party members, while making their leadership status vulnerable to the challenges to party leadership.

3.1 The Political Arena

Time is continuous. The political arena is fragmented into ideological subgroups such as the left wing and the right wing, and we focus on an arbitrarily chosen subgroup. There is a continuum of leaders who are a disjointed set from politicians.The leaders differ from politicians by having the ability to lead a party. The leaders are heterogeneous in their ideology and competence. A leader's ideology, denoted γ, can take two values: i) moderate, M, or ii) extreme, E. The probability that a leader has a moderate ideology is p^M. A party leader's competence is represented by a parameter η which governs how productively she leads the party's resources. This productivity parameter is distributed uniformly with support on [0,1].

Politicians are also heterogeneous in two dimensions: ideology and the amount of political assets they have. Politicians' ideology is assumed to have the same distribution as party leaders' ideology. The heterogeneous amounts of politicians' infinitesimal assets, denoted by z, are distributed according to $L(z)$ with positive density $\ell(z) > 0$ on $[0, z^{max}]$.

We assume that there is a finite number of parties, indexed by $k \in \{1, 2, \ldots, K\}$. Each party opens measure 1 positions. To fill these positions, a leader may either appoint his loyalists or ask for the help of local organizers. A local party organizer possesses information regarding the local electorate's candidate preferences. When a leader asks an organizer to select the candidates, the organizer uses his locality-specific information to pick the candidates with the most productive political assets.

3.1.1 Timing of the political game

After parties as organizations (that is, leaders, organizers, and regular politicians) have made their decisions, they compete with each other in openly contested and repeated elections. We can thus summarize the timing of the events as follows.

1. A party leader selects the candidates, potentially with the help of local party-branches.

2. A moderate (extremist) challenger to party leadership arrives with probability $\alpha^M (\alpha^E)$.

3. If there is a challenger, each candidate votes to choose between the incumbent and the challenger.

4. The challenger wins the leadership position if she earns at least half of the candidates' votes. Otherwise, the incumbent maintains her status as the leader.

5. The party competes in the elections with its newly selected leader.

6. After the election, a new term begins, and steps 1 to 5 are repeated.

3.1.2 Payoff functions

A party's objective is to maximize its total assets. Formally, total assets, denoted x_k, are given by the sum of all members' political assets. The total assets of a party depend on all incumbent party leaders' competence, ideology, and delegation rate because the parties compete at the local level over the politicians. When a party leader delegates member recruitment to the organizers, the organizers can use their superior information about the quality of the local candidates to recruit the highest quality individuals. However, when more than one party's leader delegates the member recruitment choice to their local organizations, then the organizers of different parties compete at the local level over high quality politicians.

Let ϕ denote the share of party k's members whose candidates are selected by the organizers. The party's expected total assets, x_k, are given by the following expression:

$$E[x_k(\Phi, \mathbb{N}, \Gamma)] = \phi z_k^D(\Phi, \mathbb{N}, \Gamma) + (1 - \phi)z_k^L(\Phi, \mathbb{N}, \Gamma) \qquad (3.1)$$

where $\Phi = [\phi_1, \phi_2, ..., \phi_K]$, $\mathbb{N} = [\eta_1, \eta_2, ..., \eta_K]$, $\Gamma = [\gamma_1, \gamma_2, .., \gamma_K]$ are the vectors of competence, ideology, and delegation rates of each of K party's leaders, respectively. z_k^D and z_k^L are the average assets of the members recruited by the organizers

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and the leader, respectively. Note that z_k^D and z_k^L are not known until all party members are recruited. Section 4.5 derives the expected values of z^D and z^L in equilibrium for each party.

The type-(γ, η) leader of party k uses the party's assets to run a political campaign according to the campaign production function $f_k(x_k(\Phi, \mathbb{N}, \Gamma))$ such that

$$f_k(\Phi, \mathbb{N}, \Gamma) = x_k^\eta(\Phi, \mathbb{N}, \Gamma). \tag{3.2}$$

Equation 3.2 assumes that all that matters in campaign production is members' total assets and the leader's productivity.[7] Similar to span-of-control models, a more capable leader can lead to more resources (Akcigit et al. (2018); Lucas Jr (1978); Eeckhout and Kircher (2012)).

Let $\tilde{\gamma}$ denote a politician's ideological match with the leader, with $\tilde{\gamma} = 1$ if $\gamma_i = \gamma$ and $\tilde{\gamma} = 0$ otherwise. Politician i's payoff with a type-(γ, η) leader, u_i, is a function of his ideological match with the leader and the leader's competence, $\theta(\tilde{\gamma}_i, \eta)$.

$$u_i = \theta(\tilde{\gamma}_i, \eta) \tag{3.3}$$

We assume that $\theta(1, \eta) > \theta(0, \eta)$ and $\frac{\partial \theta(\tilde{\gamma}_i, \eta)}{\partial \eta} > 0$. [8]

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[7]Although we assume that parties' competition in their policies does not affect their rents, we allow for the parties' identities and the electorate's party-specific preferences to affect the parties' vote shares, as explained in the next section.

[8]A politician may drive both pecuniary and non-pecuniary utility from the party leader's competence. In addition to the pecuniary benefits associated with the increased chances of winning an election with a more competent leader, a politician may benefit from the prestige and the security of affiliating with a strong party. Instead of imposing structure on a politician's utility from a leader's competence, we assume that the utility function translates into a politician's exchange rate between ideological match and competence.

Finally, a party leader's payoff increases in her party's campaign production of votes (rents).

$$\omega = f_k(\Phi, \mathbb{N}, \Gamma) \tag{3.4}$$

where f is defined in equation 3.2.

3.2 Competition Between Parties

This section explains how a party's campaigning efforts translate into its vote share. Let ν_{ikct} denote the utility voter i derives from voting for party k in district c at time t. This utility is the sum of the party's rents, $f(\phi, \eta)$; the voter's ideological match with the leader, $\tilde{\gamma}_i$; the electorate's unobserved, zero-mean, stationary preference shock for the party at time t, ξ_{kct}; and an idiosyncratic taste shock, ϵ_{ikct}.

$$\nu_{ikct} = f_k(\Phi, \mathbb{N}, \Gamma) + \tilde{\gamma}_i + \xi_{kct} + \epsilon_{ikct}. \tag{3.5}$$

When ϵ_{ikct} is generated from an extreme value distribution as in the logit model, the vote share of party k in district c at time t is

$$v_{kct} = \frac{e^{f_k(\Phi, \mathbb{N}, \Gamma) + \tilde{\gamma}_i + \xi_{kct}}}{\sum_{k=0}^{K} e^{f_k(\Phi, \mathbb{N}, \Gamma) + \tilde{\gamma}_i + \xi_{kct}}} \tag{3.6}$$

Similarly, we can write a voter's utility from not voting for any party and obtain

the share of people who do not vote for any party

$$v_{0ct} = \frac{e^{\xi_{0ct}}}{\sum_{k=0}^{K} e^{f_k(\Phi,\mathbb{N},\Gamma)+\tilde{\gamma}_i+\xi_{kct}}} \qquad (3.7)$$

Applying the Hotz and Miller (1993)'s inversion theorem to equations 3.6 and 3.7, we obtain the relationship between the party-specific utility functions and the vote shares,

$$log(v_{kct}) - log(v_{0ct}) = f_k(\Phi,\mathbb{N},\Gamma) - \xi_{0ct} + \xi_{kct}. \qquad (3.8)$$

Notice that although a party's size, $x_k(\Phi,\mathbb{N},\Gamma)$, is time-invariant conditional on all parties' incumbent leaders and those leaders' delegation rules, a party's vote share may change over time. This is because a leader's stationary decision rule is time-invariant, but voters have time-variant preference shocks for parties.

3.3   Value Functions

We next construct and analyze the value functions of a leader and a party member. Conditional on the other party leaders' types and delegation rates, $\Upsilon_{-k} = [\Phi_{-k}, \mathbb{N}_{-k}, \Gamma_{-k}]$, the lifetime value of party k's leader depends on her ideology, γ, delegation rate, ϕ, and competence η. Let $\psi = [\gamma, \phi, \eta]$ be the vector of state variables. The value of party k's type-(γ, η) leader, $V_k^{leader}(\psi)$, is

$$\underbrace{V_k^{leader}(\psi|\Upsilon_{-k})}_{\substack{\text{value of a type-}(\gamma,\eta)\text{ leader who} \\ \text{delegates a share }\phi\text{ of positions}}} = \tau\underbrace{f_k(\Phi,\mathbb{N},\Gamma)}_{\text{flow payoff}} + \tau\underbrace{\frac{1}{1+\rho}}_{\text{discounter}}\left\{\underbrace{(1-\alpha_M-\alpha_E)}_{\text{no challenge}}\underbrace{V_k^{leader'}(\psi|\Upsilon'_{-k})}_{\substack{\text{no change} \\ \text{in leadership}}}\right.$$

$$+ \underbrace{\alpha_M}_{\substack{\text{challenge} \\ \text{by M}}}\underbrace{V_k^{challenge,M}(\psi|\Upsilon'_{-k})}_{\substack{\text{value of }(\gamma,\eta)\text{ when} \\ \text{M challenger arrives}}} + \underbrace{\alpha_E}_{\substack{\text{challenge} \\ \text{by E}}}\underbrace{V_k^{challenge,E}(\psi|\Upsilon'_{-k})}_{\substack{\text{value of }(\gamma,\eta)\text{ when} \\ \text{E challenger arrives}}}$$

$$\left.+ \quad o(\tau)\right\} \tag{3.9}$$

Reading from left to right, the value a type-(γ,η) leader receives when she delegates the recruitment of a share ϕ of the candidates, $V_k^{leader}(\psi|\Upsilon_{-k})$, is the sum of a flow payoff and a continuation value that she receives for an infinitesimally small time period τ, plus a term $o(\tau)$. The flow payoff, $f_k(\Phi,\mathbb{N},\Gamma)$, consists of the party's rents. The continuation value, which the leader weighs at rate ρ, weights the expected values of three mutually exclusive events: not having any challengers; having a challenger with ideology γ^M, which occurs at rate α^M; and having a challenger with ideology γ^E, which occurs at rate α^E. When there is no challenger, the leader receives the value of leadership, $V_k^{leader'}(\psi|\Upsilon_{-k})$, with the same state vector ψ given the distribution of the types of other parties' leaders, Υ'_{-k}. This distribution may be different from its initial distribution if other parties' leaders lost a leadership challenge. The leader still has the same state vector because her type-(γ,η) is constant and she cannot change the delegation rate until a new election cycle begins. When a challenger of ideology j, for $j \in \{M,E\}$, arrives,

the expected value of the leader, $V_k^{challenge,j}(\psi)|\Upsilon'_{-k}$, is

$$\underbrace{V_k^{challenge,j}(\psi|\Upsilon'_{-k})}_{\substack{\text{expected value of incumbent} \\ \text{when challenged by } i}} = \underbrace{\pi^j(\psi|\Upsilon'_{-k})}_{\substack{\text{incumbent wins} \\ \text{the challenge}}} \underbrace{V_k^{leader'}(\psi|\Upsilon'_{-k})}_{\substack{\text{value of type-}(\eta,\gamma) \\ \text{leader who delegates} \\ \text{a share } \phi \text{ of positions}}} + \underbrace{(1-\pi^j(\psi|\Upsilon'_{-k}))}_{\substack{\text{incumbent loses} \\ \text{the challenge}}} \underbrace{V_k^{exit}(\psi)}_{0}.$$

(3.10)

Reading from left to right, the value the incumbent leader receives when challenged by someone of ideology j, $V_k^{challenge,j}(\psi)$, weights the expected values of winning and losing the challenge. If the leader wins the challenge, which occurs with probability $\pi^j(\psi|\Upsilon'_{-k})$, the leader continues to receive the leadership value. If she loses leadership, then she exits politics and receives the exit value, $V_k^{exit}(\psi)$, which is normalized to zero.

Next, notice that a leader's lifetime value does not change when the other parties' leaders change, i.e. $V_k^{leader}(\psi|\Upsilon_{-k}) = V_k^{leader'}(\psi|\Upsilon'_{-k})$. This follows from our assumptions regarding the timing of events. We consider 'lifetime' as the duration between two elections. At the beginning of an election term, all leaders choose their delegation rates and recruit members before any challenger arrives. During the recruitment process, the distribution of leader types affects the party choices of politicians. Once politicians are recruited to parties, they stay in their parties until the next election term, even if party leadership changes. Hence, each party's total assets are fixed until the beginning of the next election term. Equations 3.2 and 3.4 show that a leader's payoff function depends only on the leader's competence and the party's assets. Hence, the leader's payoff is fixed *within* an election term.[9]

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[9] Notice, however, that a change of other parties' leaders can affect party k's vote share through equation 4.6, but it does not affect the party's campaign and its leader's payoff, $f(\cdot)$.

Then, taking the limit as $\tau \to 0$ and substituting equation 3.10 into equation 3.9 and rearranging the terms, we obtain:

$$V^{leader}(\psi|\Upsilon_{-k}) = \frac{(1+\rho)f_k(\Phi, \mathbb{N}, \Gamma)}{1 + \rho - (1 - \alpha_M - \alpha_E) - (\alpha^M \pi^M(\psi|\Upsilon_{-k}) + \alpha^E \pi^E(\psi|\Upsilon_{-k}))}.$$

(3.11)

Let $\eta^E(\psi)$ be the equilibrium threshold ability type of an extremist challenger such that $\pi^E(\psi|\Upsilon_{-k}|\eta' \geq \eta^E(\psi)) \leq \frac{1}{2}$. In other words, all extremist challengers with competence $\eta' \geq \eta^E(\psi)$ are expected to beat the incumbent. Similarly, define $\eta^M(\psi)$ as the threshold ability type of a moderate challenger such that all moderate challengers with competence $\eta' \geq \eta^M(\psi)$ can beat the incumbent. That is, $\pi^M(\psi|\Upsilon_{-k}|\eta' \geq \eta^M(\psi)) \leq \frac{1}{2}$. The equilibrium threshold types of challengers who can beat the incumbent leader, η^M and η^E, are derived in the next section. Here, we take them as given to write the value a regular politician receives in a party with a type-(η, γ) leader who delegates a share ϕ of the party positions

$$
\underbrace{V_i(\psi)}_{\substack{\text{value } i \text{ receives w/a} \\ \text{type-}(\gamma,\eta) \text{ leader}}} = \tau \underbrace{u_i(\psi)}_{\text{flow payoff}} + \tau \underbrace{\frac{1}{1+\rho}}_{\text{discounter}} \left(\underbrace{(1 - \alpha^M - \alpha^E)}_{\text{no challenge}} \underbrace{V_i(\psi)}_{\substack{i \text{ continues to receive} \\ \text{the value w/incumbent}}} \right.
$$

$$
+ \underbrace{\alpha^M}_{\substack{\text{challenge} \\ \text{by an M}}} \left[\underbrace{\int_{\eta^M(\psi)}^{1} V_i(M, \phi(M,s), s)\,ds}_{\substack{\text{value with M challenger} \\ \text{who can beat incumbent}}} + \underbrace{\int_{0}^{\eta^M(\psi)} V_i(\psi)\,ds}_{\substack{\text{incumbent beats the challenger} \\ i \text{ receives the value w/incumbent}}} \right]
$$

$$
\left. + \underbrace{\alpha^E}_{\substack{\text{challenge} \\ \text{by an E}}} \left[\underbrace{\int_{\eta^E(\psi)}^{1} V_i(E, \phi(E,s), s)\,ds}_{\substack{\text{value with E challenger} \\ \text{who can beat incumbent}}} + \underbrace{\int_{0}^{\eta^E(\psi)} V_i(\psi)\,ds}_{\substack{\text{incumbent beats the challenger} \\ i \text{ receives the value w/incumbent}}} \right] \right) + o(\tau).
$$

$$(3.12)$$

Reading from left to right, the value politician i receives with a type (γ, η) leader with delegation rate ϕ, $V_i(\psi)$, consists of the sum of a flow payoff and a continuation value that she receives for an infinitesimally small period τ plus a term $o(\tau)$. The flow payoff is defined in equation 3.3. The continuation value, which the politician discounts at rate ρ, weights the expected values of three mutually exclusive events: the incumbent not being challenged, being challenged by a moderate-ideology competitor, or being challenged by an extremist competitor. When there is no challenge, which happens with probability $(1 - \alpha^M - \alpha^E)$, the politician continues to receive the value he has with the incumbent, $V_i(\psi)$. If the leader is challenged by a moderate, which occurs at rate α^M, the leader may lose or win the challenge. If the challenger wins, which happens when the challenger's competence level, s, is such that $s \geq \eta^M(\psi)$, the politician receives the value the challenger provides, $V_i(M, \phi(M,s), s)$. If the incumbent wins, politician i continues to receive the value from the incumbent, $V_i(\psi)$. Similarly, if the leader is

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challenged by an extremist competitor, which occurs at rate α^E, the challenger wins if her competence level, s, is such that $s \geq \eta^E(\psi)$. Then, the politician receives the value the challenger provides, $V_i(E, \phi(E, s), s)$. If the incumbent wins, politician i continues to receive the value from the incumbent, $V_i(\psi)$.

Taking the limit as $\tau \to 0$ and rearranging the terms in equation 3.12, we obtain

$$V_i(\psi) = \frac{(1+\rho)u_i(\psi) + \alpha^M \int_{\eta^M(\psi)}^1 V_i(M, \phi(M, s), s)ds + \alpha^E \int_{\eta^E(\psi)}^1 V_i(E, \phi(E, s), s)ds}{\rho + \alpha^M + \alpha^E - \alpha^M \eta^M(\psi) - \alpha^E \eta^E(\psi)}.$$
(3.13)

3.4 Solving the Leader's and the Politician's Problems

With value functions in place, we now proceed to solve the leader's and a regular politician's optimization problems. Recall that a leader wants to maximize her probability to survive a challenge to her leadership position, while the politician chooses a leader if a leadership challenge is waged in order to maximize electoral rents (i.e., the probability of re-election). We start with the leader's problem.

3.4.1 Probability of winning a leadership election

We first must derive an incumbent leader's probability of winning the election against a challenger. To do this, we conjecture an equilibrium in which, given the delegation rate of each leader type, a politician's lifetime value maximization problem translates into deciding the threshold challenger competency level they prefer over the incumbent leader. The threshold challenger type depends on the ideology

of the politician, leader, and the challenger. An incumbent leader computes the probability of surviving a challenge by integrating over the probabilities that each type of party member chooses the incumbent over a challenger.[10]

When a type-(γ, η) party leader delegates a share ϕ of party positions, the party members recruited by the party organizations vote for the leader with probability $\Omega^M(\Omega^E)$ when a moderate (extreme) challenger arrives. The share $(1 - \phi)$ of loyalists choose the incumbent in any challenge. Therefore, the probability that a type-(γ, η) party leader who delegates a share ϕ of party positions wins a challenge is

$$\pi^M(\psi|\Upsilon_{-k}) = (1 - \phi) + \phi\Omega^M(\psi|\Upsilon_{-k}) \tag{3.14}$$

when the challenger is a moderate, and the leader's probability of winning is

$$\pi^E(\psi|\Upsilon_{-k}) = (1 - \phi) + \phi\Omega^E(\psi|\Upsilon_{-k}) \tag{3.15}$$

when the challenger is an extremist. The next section derives Ω^E and Ω^M.

3.4.2 A regular politician's choice in leader

This section derives the probability that a regular party member prefers the incumbent leader over a challenger. To do this, we compare the lifetime value of party membership (in equation 3.13) provided by two competitors in four different scenarios.

---

[10]While choosing the delegation rate, each leader, in turn, considers the probability of winning a leadership race given the probabilities of each member preferring them over a challenger conditional on the chosen delegation rate.

Case 1: A type-(M, η) leader vs a type-(M, η') leader such that $\eta > \eta'$

Equation 3.13 shows that, if two moderate candidates compete for leadership, the candidate with the higher competency level provides a greater value to both the moderate and the extremist party members. Therefore, we have that

$$\underbrace{\Omega^M(M, \phi, \eta)}_{\substack{\text{probability that members choose an } (M, \eta)\text{-} \\ \text{leader over an } M \text{ challenger}}} = \eta. \qquad (3.16)$$

Case 2: A type-(M, η) leader vs a type-(E, η') leader such that $\eta > \eta'$

When a moderate leader competes against a less competent extremist candidate, the moderate and the extremist regular party members follow different rules for choosing a leader. Equation 3.13 demonstrates that a moderate party member chooses the type-(M, η) leader because she provides both a higher payoff and a higher continuation value. On the other hand, an extremist party member has a greater payoff from the ideological match of the extremist candidate and a greater payoff from the competence of the moderate candidate. While we do not impose structure on the functional forms of the payoff from these two components of a politician's utility function, we conjecture an equilibrium in which an extremist party member chooses type-(E, η') leader if $\eta' \leq \eta - c^E$ and chooses M otherwise. Let a^M be the share of moderate party members. We have:

$$\underbrace{\Omega^E(M, \phi, \eta | \eta > \eta')}_{\substack{\text{probability that members choose an} \\ (M, \eta)\text{-leader over an } (E, \eta')\text{-challenger} \\ \text{when } \eta > \eta'}} = \underbrace{a^M}_{\substack{\text{M members} \\ \text{choose M leader} \\ \text{w/prob. 1}}} + \underbrace{(1 - a^M)}_{\substack{\text{share of E} \\ \text{members}}} \underbrace{(\eta - c^E)}_{\substack{\text{prob that E members} \\ \text{prefer the M} \\ \text{over the E leader}}} \underbrace{1_{\{\eta - c^E > 0\}}}_{\substack{\text{if the M leader} \\ \text{has sufficiently} \\ \text{high } \eta}}$$

$$(3.17)$$

where $c^E > 0$ determines an extremist party member's exchange rate between

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ideological match and competence. Note that $c^E > 0$ is an equilibrium value that cannot be pinned down unless more structure is imposed on a politician's payoff function.

Case 3: A type-(M, η) leader vs a type-(E, η') leader such that $\eta < \eta'$

When a moderate leader competes against a more competent extremist candidate, the moderate and the extremist regular party members follow different rules for choosing a leader. An inspection of equation 3.13 shows that an extremist party member chooses the type-(E, η) leader because she provides both a higher payoff and a higher continuation value. On the other hand, a moderate party member may or may not prefer the moderate leader depending on whether the extremist challenger's competence is high enough to compensate for the lack of ideological match. We conjecture an equilibrium such that a moderate party member chooses type-(E, η') leader if $\eta' \geq \eta + c^M$ and chooses M otherwise.

$$\underbrace{\Omega^E(M, \phi, \eta | \eta < \eta')}_{\substack{\text{probability that members choose an} \\ (M, \eta)\text{-leader over an } (E, \eta')\text{-challenger} \\ \text{when } \eta < \eta'}} = \underbrace{0}_{\substack{\text{E members} \\ \text{choose E leader} \\ \text{w/prob. 1}}} + \underbrace{a^M}_{\substack{\text{share of M} \\ \text{members}}} \underbrace{(1 - \eta - c^M)}_{\substack{\text{prob. that M} \\ \text{members prefer} \\ \text{M over E}}} \underbrace{1_{\{1 - \eta - c^M > 0\}}}_{\substack{\text{if E has} \\ \text{sufficiently low } \eta'}}$$

(3.18)

Case 4: A type-(E, η) leader vs a type-(E, η') leader such that $\eta > \eta'$

Similar to case 1, an inspection of equation 4.16 shows that, if two extremist candidates compete for leadership, the candidate with the higher competence level provides a greater value to both the moderate and the extreme party members. Therefore, we have that

$$\underbrace{\Omega^E(E, \phi, \eta)}_{\substack{\text{prob. that members choose an } (E, \eta)\text{-} \\ \text{leader over an } E \text{ challenger}}} = \eta. \qquad (3.19)$$

Finally, a moderate leader's unconditional probability of winning against an extremist candidate, $\Omega^E(M, \phi, \eta)$, weights the conditional probabilities in equations 3.18 and 3.19 with the probabilities of these events occurring

$$\Omega^E(M, \phi, \eta) = (1 - \eta)\Omega^E(M, \phi, \eta | \eta < \eta') + \eta\Omega^E(M, \phi, \eta | \eta > \eta'). \qquad (3.20)$$

4 Results

We are now ready to present our main results and derive the optimal delegation rule. We start by characterizing the solution to local organizations' recruitment problem if, of course, given the option by the leader.

4.1 Local Organizations' Competition over Competent Candidates

We can now formally derive a party's total assets by modeling the local organizers' competition over the competent candidates given each party leader's type and delegation rule. First we conjecture an equilibrium. That is, we temporarily assume –and later show that this holds in equilibrium– that a more competent leader delegates more.

Conjecture 1. *The share of delegated positions, ϕ_k, is increasing in leaders' ability η.*

When multiple parties' leaders delegate the recruitment decision, the local

organizers of these parties compete to recruit the most resourceful candidates. The outcome of the parties' competition over politicians is determined by politicians' preference for the parties and is summarized by the following remark.

Remark 1. *The likelihood that a regular politician joins party k with a type-(γ, η) leader is:*

1. *increasing in the leader's competence η,*

2. *increasing in the leader's delegation choice ϕ_k, and*

3. *increasing in the degree of their ideological similarity (that is, decreasing in the distance between γ and their ideal point)*

The above (points 1 and 3) follow immediately by inspection of a politician's value function (equation 3.13) and conjecture 1 (point 2). It simply says that a politician prefers a party with a leader who is more competent, delegates more, and is a close ideological match with him.

Therefore, the first two criteria in a politician's preference for joining a party overlap. However, as described in section 4.5.2, a politician may prefer a leader with a better ideological match to a more competent leader. As a result, leaders' competency ranking alone cannot determine the preference ordering of competent politicians for parties. In other words, Remark 1 characterizes the tension in a politician's party selection criteria.

In turn, the organizer of party k aims to recruit the most resourceful politicians. However, because of the competition over the competent candidates and the possible insufficient supply of the most competent candidates, the organizer ends up recruiting a *distribution* of politician types who are just sufficient to fill a share ϕ_k of the party positions. Party k recruits the most resourceful candidates

who prefer joining party k over all other parties that are trying to recruit them. The assets of the recruited politicians may differ by politicians' ideology because the candidates' preference-ordering for parties, and, hence, availability for party k, depends on their ideology. The following result characterizes the total share of politicians who are successfully recruited locally and join party k.

Proposition 1. *Let $\bar{z}_k^M(\Upsilon)$ and $\bar{z}_k^E(\Upsilon)$ be the highest types of moderate and extremist candidates recruited by party k's organizations, respectively. Similarly, let $\underline{z}_k^M(\Upsilon)$ and $\underline{z}_k^E(\Upsilon)$ be the lowest types of moderate and extremist candidates recruited by party k's organizations.*

Then, the total share of politicians who are recruited by organizer is given by

$$
\begin{aligned}
\sum_{k=1}^{K} \phi_k &= \sum_{k=1}^{K} \left(p^M \int_{\underline{z}_k^M(\Upsilon)}^{\bar{z}_k^M(\Upsilon)} \ell(z)dz + (1-p^M) \int_{\underline{z}_k^E(\Upsilon)}^{\bar{z}_k^E(\Upsilon)} \ell(z)dz \right) \\
&= p^M \int_{min\{\underline{z}_J^M(\Upsilon),\underline{z}_K^M(\Upsilon)\}}^{z^{max}} \ell(z)dz + (1-p^M) \int_{min\{\underline{z}_J^E(\Upsilon),\underline{z}_K^E(\Upsilon)\}}^{z^{max}} \ell(z)dz \quad (4.1)
\end{aligned}
$$

Proof. First, notice that these threshold types depend on each leader's type and delegation rate, Υ (as defined in equation 3.1), because of the parties' competition for the candidates. Recall that a politician's ideology is independently distributed from his resources and that the share of moderate politicians is p^M. So, the joint distribution of M candidates is $p^M \ell(z)$. The threshold politician ability types $\bar{z}_k^M(\Upsilon), \bar{z}_k^E(\Upsilon), \underline{z}_k^M(\Upsilon)$, and $\underline{z}_k^E(\Upsilon)$ are determined in equilibrium so that the organizers recruit a share ϕ_k of the party positions with the most skillful available politicians:

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$$\underbrace{\phi_k}_{\substack{\text{share of positions} \\ \text{recruited by organizers}}} = p^M \underbrace{\int_{\underline{z}_k^M(\Upsilon)}^{\bar{z}_k^M(\Upsilon)} \ell(z)dz}_{\substack{\text{share of M members} \\ \text{recruited by organizers}}} + (1-p^M) \underbrace{\int_{\underline{z}_k^E(\Upsilon)}^{\bar{z}_k^E(\Upsilon)} \ell(z)dz}_{\substack{\text{share of E members} \\ \text{recruited by organizers}}} \tag{4.2}$$

Let $x_1^M, x_2^M, ..., x_J^M$ be the parties with a moderate leader in decreasing order of the party leader's competence. Similarly, let $x_{J+1}^E, x_{J+2}^E, ..., x_K^E$ be the parties with an extremist leader in decreasing order of the party leader's competence. Because a politician prefers a more competent leader, conditional on the leader's ideology, this ordering of parties also reflects a politician's preference-rank of parties for membership. However, depending on a politician's exchange rate between ideology and the leader's competence, a politician may prefer a party with a better ideological match to a party with a more competent leader. Therefore, it is not possible to rank the parties by their total assets without having further information on the distribution of candidates' types and preferences. Nevertheless, because x_J^M and x_K^E are the parties with the least-preferred M and E leaders, the candidates recruited by these parties' local organizers have the least amounts of resources among all politicians who are recruited by an organizer. The result then follows. $\square$

With proposition 1 in place, we can now characterize a party's total expected assets. Recall that, when a leader recruits a party member herself, she randomly samples from the full set of all available candidates, whose assets have a right-truncated distribution because as we have just shown the organizers have recruited the most competent candidates. Thus, the total expected assets of party k, whose leader delegates a share ϕ_k of party-candidate positions is given by expression:

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$$E[x_k|\Upsilon] \;=\; \phi_k z_k^D(\Upsilon) + (1-\phi_k)z_k^L(\Upsilon) \tag{4.3}$$

where

$$\phi_k z_k^D(\Upsilon) \;=\; p^M \int_{\underline{z}_k^M(\Upsilon)}^{\bar{z}_k^M(\Upsilon)} z\ell(z)dz + (1-p^M)\int_{\underline{z}_k^E(\Upsilon)}^{\bar{z}_k^E(\Upsilon)} z\ell(z)dz \tag{4.4}$$

and

$$\underbrace{(1-\phi_k)z_k^L(\Upsilon)}_{\substack{\text{total assets of} \\ \text{loyal members}}} \;=\; \underbrace{(1-\phi_k)}_{\substack{\text{share of loyal} \\ \text{members}}} \Bigg(\underbrace{p^M}_{\substack{\text{probability that a} \\ \text{loyal member is M}}} \underbrace{\int_0^{min\{\underline{z}_J^M(\Upsilon),\underline{z}_K^M(\Upsilon)\}} z\ell(z)dz}_{\substack{\text{average asset} \\ \text{of an M loyal member}}}$$

$$+ \;\; \underbrace{(1-p^M)}_{\substack{\text{probability that a} \\ \text{loyal member is E}}} \underbrace{\int_0^{min\{\underline{z}_J^E(\Upsilon),\underline{z}_K^E(\Upsilon)\}} z\ell(z)dz}_{\substack{\text{average asset of an} \\ \text{E loyal member}}} \Bigg).$$

$$\tag{4.5}$$

4.2 Leader's Optimal Delegation Rule

After having characterized a party's total expected assets, which also pins down the party's production function (see equations 3.1 and 3.2), we can then work our way through the leader's value function to obtain the optimal delegation rule, ϕ_k^*. The latter is found by maximizing a leader's lifetime value function (described in equation 3.11) given her probability of remaining the leader (characterized in equations 3.14 to 3.20), which, in turn, depends on the extent of delegation. Solving for the first order condition of a leader's lifetime value in equation 3.11 with respect to delegation share ϕ yields the optimal delegation rule from the leader's perspective. The statement below formally characterizes the optimal rule.

Theorem 1. *Let the production function of party k, f_k, be characterized as in (3.2). Then, in equilibrium, a type-(γ, η) leader with $\gamma \in E, M$ and $\eta \sim [0, 1]$ and a lifetime value function $V(\psi|_{-k})$ chooses to delegate a share of positions equal to the following expression*

$$\phi_k^*(\psi) = \frac{f_k}{f_k'} - \frac{\rho}{(1 - \Omega^E(\psi))\alpha^E + (1 - \Omega^M(\psi))\alpha^M} \tag{4.6}$$

where $\Omega^E(\psi)$ and $\Omega^M(\psi)$ are as defined in equations 3.16 to 3.20.

Proof. This follows straightforwardly from direct computations presented in Appendix B. $\square$

We can further substitute the production function (in equation 3.2) into equation 4.6 above to obtain the following analytical expression, which can be used for the purposes of conducting comparative statics:

$$\phi_k^*(\psi) = \begin{cases} \underbrace{\frac{z_k^L}{(\eta - 1)(z_k^D - z_k^L)}}_{\text{loss in rents}} - \underbrace{\frac{\eta}{\eta - 1} \frac{(1 - \rho)}{\rho(1 - \Omega^E(\psi))\alpha^E + \rho(1 - \Omega^M(\psi))\alpha^M}}_{\text{gain in winning prospects}} & \text{if } \phi \in (0, 1) \\\\ 0 & \text{if } \phi \leq 0 \\\\ 1 & \text{if } \phi \geq 1 \end{cases} \tag{4.7}$$

As is apparent, the expression of the optimal rule captures the trade-off we have described in the introduction: higher levels of delegation reduce the leader's rents due to fewer loyalists (left fraction) but, at the same time, increase the party's and, hence, the leader's own winning prospects. Thus, changes in any of the two

due to exogenous shocks will vary with the optimal delegation rule. We explore such comparative statics in the next subsection.

4.3 Comparative Statics

We conclude the presentation of our results by conducting and commenting on a series of comparative statics. The results are summarized in the propositions below. First, we focus on politicians' asset distributions.

Proposition 2. *A leader is more likely to delegate when the variance of the assets of politicians is bigger, and the mean of politicians' assets is lower.*

Proof. The result readily follows by inspection of equation 4.7. □

When the politicians' assets have substantial variation, the gap between the assets of politicians recruited by the organizers and the leader, $(z^D - z^L)$, widens, which increases the returns to delegation. In contrast, a leader is less likely to delegate when the probability of being challenged, α^M and α^E, goes up. Similarly, a leader is more likely to delegate if delegated members are more likely to side with her when a challenger arrives. The proposition that follows summarizes this intuition and formalizes the conditions.

Proposition 3. *The equilibrium delegation rule $\phi^*(.)$ is increasing: i) in leaders' competence, η, and ii) in leaders' probability of winning a challenge, $\Omega^E(.)$ and $\Omega^M(.)$, for any given ideology $\gamma \in E, M$.*

Proof. The result follows from direct computations, presented in Appendix B. □

In other words, more competent leaders and the leaders who have higher retention, or survival, probability are more likely to delegate. It then follows that,

when the share of extremist politicians is lower than the share of moderate ones, moderate leaders are more likely to win a leadership contest.

This final comparative static characterizes a pattern we call, the 'slippery slope' of democratic, intraparty politics. The less competent and the more extremist leaders tend to lose democratic leadership competitions because they cannot provide a high party membership value to politicians. To prevent the loss of their position, such leaders tend to fill the ranks in their parties with loyalists. Loyalists typically have fewer political resources than the politicians who are recruited by local party organizers. At the same time, loyalists always side with the incumbent leader when a challenger arrives. As a result of these facts, less competent and more extremist party leaders tend to stay at the helm of their parties for a longer time than more moderate and more competent leaders, despite these more extremist leaders causing their parties to shrink under their leadership.

4.3.1 Some remarks on partisan welfare and efficiency

Given that in our set-up voters (and agents in general) have heterogeneous preferences (e.g. over ideology), a classical welfare analysis from the point of view of finding the socially optimal level of delegation, ϕ^{SO}, falls outside of the scope of our paper. The reason is that since our game is 'as if' it were a zero-sum game, any interior solution would be by definition lying on the Pareto frontier; everyone would want to recruit the highest ability politicians for their ideologically preferred party. Moreover, since 'good' politicians are always selected as candidates irrespective of the party/firm they eventually sort to, we are again in the Pareto, first-best frontier for overall welfare and politician quality.

Therefore, the only meaningful welfare analysis is one that takes the perspec-

tive of an ordinary party member, or supporter. This is because, while the derived delegation rule is optimal from the perspective of the organization's senior leadership, this might not be the case for an ordinary party supporter. We take on this point here, briefly, without conducting a full-blown welfare analysis.

To put it differently, we want to ask the following question: what is the ϕ_k^P that maximizes a party's total expected assets $E[x_k|(\Upsilon)]$? We assume that this is the objective of the ordinary party supporter.[11] The answer is summarized below.

Corollary 1. *The party-member's optimal level of delegation is $\phi_k^P = 1$.*

Proof. Start from equation (4.3) and observe that expression $E[x_k|\Upsilon] = \phi_k z_k^D(\Upsilon) + (1 - \phi_k)z_k^L(\Upsilon)$ is maximized when $\phi_k = 1$, *if and only if* $z_k^D(\Upsilon) > z_k^L(\Upsilon)$. By inspecting (4.4) and (4.5), the latter is true when the following two inequalities hold:

$\int_{\underline{z}_k^M(\Upsilon)}^{\bar{z}_k^M(\Upsilon)} z\ell(z)dz > \int_0^{min\{\underline{z}_J^M(\Upsilon),\underline{z}_K^M(\Upsilon)\}} z\ell(z)dz$ and $\int_{\underline{z}_k^E(\Upsilon)}^{\bar{z}_k^E(\Upsilon)} z\ell(z)dz > \int_0^{min\{\underline{z}_J^E(\Upsilon),\underline{z}_K^E(\Upsilon)\}} z\ell(z)dz$

However, notice that the above are always satisfied since $\underline{z}_K^M(\Upsilon) \geq min\{\underline{z}_J^M(\Upsilon),\underline{z}_K^M(\Upsilon)\}$ and $\underline{z}_K^E(\Upsilon) \geq min\{\underline{z}_J^E(\Upsilon),\underline{z}_K^E(\Upsilon)\}$, respectively. This completes the argument. □

The intuition behind this statement is that local party organizers always hold an informational advantage regarding candidate selection. Thus, it follows directly that the party-optimal level of ϕ^P is equal to 1. Or, in other words, the optimal level is the full delegation of the selection process to local party organizers. But then, how does ϕ^P compare with the $\phi_k^*(.)$ that we have characterized in Theorem 1 (equation 4.7)? It is straightforward to see that any interior solution will gener-

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[11]Notice that ϕ_k is determined in equilibrium; that is, it also depends on the choices of the remaining $k - 1$ actors. For the purposes of this section, we apply a logic similar to an envelope theorem, and assume that a party's change in ϕ_k does not generate first-order effects on the choices of the other parties.

ically imply a value of ϕ_k^* strictly less than 1. The equilibrium level of delegation is less than the party-optimal one; party supporters would have been better off if all selection of political personnel was left to local organizers.

This exercise is simple in nature, but it does provide a useful insight regarding the source of this inefficiency. There is an informational wedge between party leaders and local organizers. While the latter have superior information, leaders' personal career concerns prevent them from harnessing this information,[12] which is available to their organization, in order to improve the quality of political recruitment and, hence, overall party assets. Documenting inefficiencies when the information environment is asymmetric and agents have conflicting interests is not new. Yet, it opens the black box of what type of constitutional arrangements competitive organizations with multi-level heterogeneity should put in place to maximize organizational performance. We take on this point next and conclude.

5 Discussion and Conclusion

Our work brings to surface two points that have broader implications that extend beyond intraparty politics and selection. Clearly, the ideology-competence trade-off we have identified provides a strategic link between authoritarianism, or a leader's desire for more control, and ideological extremism. This, in turn, affects the quality of political selection and democratic representation (see e.g. Dal Bó et al. (2017); Besley (2005); Besley et al. (2011)).[13] But this 'fragility of democ-

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[12]In other words, they choose to not delegate real authority over candidate selection (see also Aghion and Tirole (1997) for an analogous argument).

[13]This conclusion also echoes the well-known Fearon (1999)-Besley (2005) critique when there is significant agent (politician or candidate) heterogeneity and principals (voters) have non-common values. In our context as well, because some leaders if given authority over selection

racy' has broader implications as well in firms, bureaucracies, and organizations with multiple aims. A straightforward application is in span-of-control literature, where a senior manager's or a CEO's priorities such as corporate responsibility, environmental protection, or combating sexual harassment and discrimination can affect the quality of personnel recruitment and the firm's overall output. In other words, our model readily extends to characterize the 'slippery slope' of corporate structure in such environments. For instance, by virtue of the general nature of the trade-off that we have identified, our model can extend to characterize both firm behavior and managerial decisions in many oligopolistic markets, such as energy firms, the shipping industry, and more.

Moreover, our work makes a contribution to modelling a two-sided political labor market. Our model's main results straightforwardly extend to cases where the organization has multiple dimensions of ideological or identity concerns. Suppose that γ is instead a vector $(\gamma_1, \gamma_2, ..., \gamma_N)$ where in addition to left-right ideology one cares about liberal rights (e.g. abortion), gender/racial discrimination, ethnicity, religion, environmental degradation, and other elements of identity. Our model can readily identify the exchange rates between ability and these other dimensions. Moreover, it can lend itself to structural estimation which will allow us to endogenously determine the relative importance of each of these γ-dimensions on organizational decisions and structure.

On a more normative account, our work also offers insights with respect to the so-called 'slippery slope' of decentralized democratic decision-making processes. For instance, our findings highlight an apparent tension between higher levels

cannot credibly commit to not choosing a loyal candidate over one that generates more electoral rents, delegation can be welfare improving.

of delegating or outsourcing key decisions downstream while, at the same time, retaining competent leadership at the helm –a trade-off that is directly linked to organizational success. The latter has clear implications for optimal constitutional design and/or organizational structure regarding the desired degree of (de)centralization in decision-making. Put simply, in most set-ups characterized by significant agent and institutional heterogeneity, the equilibrium level of decentralization will generically be different from the one that maximizes organizational success. The latter will only be attained under a very strict set of conditions, if at all. Contrast this with the institutional arrangement of full decentralization under any conditions preferred by ordinary organization members (i.e., those members with no career concerns). Thus, our findings highlight the apparent tension between career concerns (at any level of management) and optimal constitutional design in heterogeneous organizations. They also point to the fact that this slippery slope is driven by the career concerns of leaders and politicians alike. Hence, optimal constitutional designs should take these concerns and the forces they generate into account.

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Appendix A   Auxiliary equations

A.1   A politician's probability of winning a seat

In a winner-takes-all election system, the candidate of the party that gets the highest vote share wins the seat that represents a district. So, the probability that politician i in party k wins a seat in district c at time t with a type-(γ, η) leader who delegates the selection of a share ϕ of party positions is

$$
\begin{aligned}
p_{ikct} &= Prob(v_{kct} > v_{mct}, \forall m \neq k) \\
&= Prob\left(\frac{e^{f_k(\eta,\phi)+\xi_{kct}}}{\sum_{s=0}^{K} e^{f_s(\eta',\phi')+\xi_{sct}}} > \frac{e^{f_m(\eta',\phi')+\xi_{mct}}}{\sum_{s=0}^{K} e^{f_s(\eta',\phi')+\xi_{sct}}}, \forall m \neq k \right) \\
&= Prob\left(f_k(\eta,\phi) + \xi_{kct} > f_m(\eta',\phi') + \xi_{mct}, \forall m \neq k \right)
\end{aligned}
\tag{A.1}
$$

We assume that the districts' party-specific shocks, ξ_{kct}, are distributed identically and independently across parties, districts, and time, i.e., $\xi_{kct} \sim i.i.d.N(0, \sigma^2_{\xi_k})$.

Then we have

$$
\begin{aligned}
p_{ikct} &= Prob\left(f_k(\eta,\phi) + \xi_{kct} > f_m(\eta',\phi') + \xi_{mct}, \forall m \neq k \right) \\
&= \prod_{m \neq k} Prob\left(f_k(\eta,\phi) + \xi_{kct} > f_m(\eta',\phi') + \xi_{mct}, \forall m \neq k \right) \\
&= \prod_{m \neq k} Prob\left(\xi_{mct} - \xi_{kct} < f_k(\eta,\phi) - f_m(\eta',\phi') \right) \\
&= \prod_{m \neq k} \Phi\left(\frac{f_k(\eta,\phi) - f_m(\eta',\phi')}{\sqrt{\sigma^2_{\xi_k} + \sigma^2_{\xi_m}}} \right)
\end{aligned}
\tag{A.2}
$$

where $\Phi(\cdot)$ denotes the standard normal distribution function and $\sqrt{\sigma^2_{\xi_k} + \sigma^2_{\xi_m}}$ is the standard deviation of $\xi_{kct} - \xi_{mct}$.

Equation A.2 derives politician i's probability of winning a seat in party k in district c at time t with a type-(γ, η) leader who delegates a share ϕ of party positions. Because the voters' preference shocks for parties are drawn from a

stationary distribution, this probability is constant over time.

Appendix B   Additional Derivations

B.1 $\frac{d\phi_l}{d\eta}$ and $\frac{d\pi(\phi_l)}{d\eta}$

$$\phi_l \quad = \quad \underbrace{\frac{1}{\eta-1}\frac{\mu_z}{(z^{max}-\mu_z)}}_{<0} - \underbrace{\frac{\eta}{\eta-1}\frac{(1-\rho)}{\rho\alpha(1-\Omega_l)}}_{>0}$$

$$\begin{aligned}
\frac{d\phi_l}{d\eta} \quad &= \quad -\frac{1}{(\eta-1)^2}\frac{\mu_z}{(z^{max}-\mu_z)} - \left[\frac{\eta-1-\eta}{(\eta-1)^2}\frac{(1-\rho)}{\rho\alpha(1-\Omega_l)} + \frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)^2}\frac{d\Omega}{d\eta}\right] \\[2mm]
&= \quad \underbrace{-\frac{1}{(\eta-1)^2}\frac{\mu_z}{(z^{max}-\mu_z)}}_{<0} + \underbrace{\frac{1}{(\eta-1)^2}\frac{(1-\rho)}{\rho\alpha(1-\Omega_l)}}_{>0} \underbrace{-\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)^2}\frac{d\Omega}{d\eta}}_{>0} \\[2mm]
&= \quad \frac{1}{\eta-1}\left(-\frac{1}{(\eta-1)}\frac{\mu_z}{(z^{max}-\mu_z)} + \frac{1}{(\eta-1)}\frac{(1-\rho)}{\rho\alpha(1-\Omega_l)}\right) \underbrace{-\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)^2}\frac{d\Omega}{d\eta}}_{>0} \\[2mm]
&= \quad -\frac{1}{\eta-1}\phi_l \underbrace{-\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)^2}\frac{d\Omega}{d\eta}}_{>0} \\[2mm]
&> \quad 0
\end{aligned}$$

$$\pi(\phi_l) \quad = \quad (1-\phi_l) + \phi_l\Omega_l$$

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$$
\begin{aligned}
\frac{d\pi(\phi_l)}{d\eta_l} &= -\frac{d\phi_l}{d\eta_l} + \frac{d\phi_l}{d\eta_l}\Omega_l + \phi_l\frac{d\Omega_l}{d\eta_l} \\
&= \frac{d\phi_l}{d\eta_l}(\Omega_l - 1) + \phi_l\frac{d\Omega_l}{d\eta_l} \\
&= \underbrace{(\Omega_l - 1)}_{<0}\Big(\underbrace{-\frac{1}{\eta-1}\phi_l}_{>0} \underbrace{-\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)^2}\frac{d\Omega}{d\eta}}_{>0}\Big) + \phi_l\frac{d\Omega_l}{d\eta_l}
\end{aligned}
$$

$$
\begin{aligned}
&= \frac{d\Omega_l}{d\eta_l}\Big((1-\Omega_l)\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)^2} + \phi\Big) + \frac{1-\Omega_l}{\eta-1}\phi_l \\
&= \frac{d\Omega_l}{d\eta_l}\Big(\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)} + \phi\Big) + \frac{1-\Omega_l}{\eta-1}\phi_l \\
&= \frac{d\Omega_l}{d\eta_l}\Big(\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)} + \frac{1}{\eta-1}\frac{\mu_z}{(z^{max}-\mu_z)} - \frac{\eta}{\eta-1}\frac{(1-\rho)}{\rho\alpha(1-\Omega_l)}\Big) + \frac{1-\Omega_l}{\eta-1}\phi_l \\
&= \underbrace{\frac{d\Omega_l}{d\eta_l}}_{>0}\Big(\underbrace{\frac{1}{\eta-1}}_{<0}\underbrace{\frac{\mu_z}{(z^{max}-\mu_z)}}_{>0}\Big) + \underbrace{\frac{1-\Omega_l}{\eta-1}\phi_l}_{<0} \\
&< 0
\end{aligned}
$$

$$
\frac{d\pi(\phi_l)}{d\eta_l} = \begin{cases}
0 & \text{if } \phi_l = 0 \\
\frac{d\Omega_l}{d\eta_l} > 0 & \text{if } \phi_l = 1 \\
(\Omega_l - 1)\Big(-\frac{1}{\eta-1}\phi_l \underbrace{-\frac{\eta}{\eta-1}\frac{1-\rho}{\rho\alpha(1-\Omega)^2}\frac{d\Omega}{d\eta}}_{>0}\Big) + \phi_l\frac{d\Omega_l}{d\eta_l} & \text{if } \phi_l \in (0,1)
\end{cases}
$$