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ABSTRACT

In this paper, we study the initial recruitment of individuals in the political sector. We propose an equilibrium model of political recruitment by a party who faces competition for political talent from the lobbying sector. We show that a political party may deliberately choose to recruit only mediocre politicians, in spite of the fact that it could afford to recruit better individuals who would like to become politicians. We argue that this finding may contribute to explain the observation that in many countries the political class is mostly composed of mediocre people.

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"We'd all like to vote for the best man, but he is never a candidate."

-F. McKinney Hubbard.

1 Introduction

The quality of politicians has long been an issue of great concern in all democracies. A widespread sentiment summarized by the opening quote above is that politicians are typically not the best a country has to offer. At the same time, however, it is also fair to say that they are not the worst either. Anecdotal evidence from around the world abounds. The current President of the United States was a "C student" at Yale University. Nevertheless he has an Ivy League college degree. Göran Persson (the former Prime Minister of Sweden) is not a college graduate. Nevertheless, he successfully completed all but a few credits to earn a social science degree at Örebro University. Pedro Miguel de Santana Lopes (the former Prime Minister of Portugal) was a sports commentator. John Major (a former Prime Minister of the U.K.) was a clerk in an insurance brokerage firm. These are all examples of politicians in some of the highest elected offices in their countries. In addition, there are thousands of lesser political offices everywhere that are occupied by "average Joes and Janes." In sum, it seems that in many different countries the political class is for the most part composed of mediocre people. We refer to this observation, which represents the focus of our work, as mediocracy.¹

In this paper, we provide a possible explanation for this phenomenon by focusing on the initial recruitment of individuals in the political sector. In most countries, relatively few individuals start off their political careers by running for a public office. More frequently, they first test their political aspirations by holding positions within party organizations, which represent "breeding grounds" from which the vast majority of elected officials come from. The role of party service (i.e., holding a regular, paid job within a party organization), as an essential qualification for pursuing a political career, is especially important in countries with a strong party system, such as, for example, Australia, Germany, Italy, Japan, the

¹According to the Webster's Third New International Dictionary of the English language, mediocracy is defined as: "rule by the mediocre." For a discussion of the origin of the term and its relevance for politics see, e.g., Tribe (1975).

Netherlands, Sweden, and the U.K. (see, e.g., Best and Cotta (2000) and Norris (1997)).² Hence, the individuals who are recruited by political parties to work in the political sector determine the quality of the pool of potential candidates for public office.³ We argue that parties may deliberately choose to recruit only mediocre politicians.

We consider a situation where a political party, who has to recruit new politicians, faces competition for "political talent" from lobbying firms.⁴ The political and the lobbying sector of an economy are in fact intimately related. The lobbying sector provides fund-raising opportunities to politicians who in turn justify the very existence of the lobbying sector. Since lobbyists have to deal with politicians, political skills are also valued by lobbying firms, and wages in the lobbying sector affect the recruiting decisions of a political party. At the same time, since to deal with skilled politicians requires skilled lobbyists, the party's recruiting decisions affect the output of the lobbying sector, and hence the wages in the sector. These two aspects of the relationship between the political sector and the lobbying sector are at the heart of our analysis.

Another important aspect of the environment we consider is that people who are potentially interested in becoming politicians typically begin their involvement in politics by en-

²For example, according to Norris and Lovenduski (1995), in the 1992 British general election, about 95% of Labour candidates and 90% of Conservative candidates had held a full-time position within the party. Rydon (1986) and Cotta (1979) suggest similar levels of party involvement among members of parliament in Australia and in Italy, respectively. In other countries, like for example, Canada, Finland, and the U.S., party service is not necessarily a pre-requisite for advancement in political careers. Even in these countries, however, the fraction of party professionals in the political sector has grown considerably over the years (e.g., Norris (1997)).

³ "Competitive democratic elections offer citizens a choice of alternative parties, governments and policies. [...] Which candidates get on the ballot, and therefore who enters legislative office, depends on the prior recruitment process. [...] In most countries recruitment usually occurs within political parties, influenced by party organizations, rules and culture." Norris (1997, pp. 1-14).

⁴Here, we ignore inter-party competition and consider an environment where there is only one political party. In general, inter-party competition for potential politicians is likely to be of secondary importance, as ideological preferences are more likely to draw individuals toward specific parties. In fact, the lack of within-sector competition for sector-specific skills is a striking feature of the political sector, which differentiates it from many other economic sectors.

gaging in a variety of voluntary, unpaid political activities that are organized and monitored by political parties (e.g., student political organizations, campaign teams, party internships). These activities thus provide opportunities for a political party to observe the political skills of individuals it may be potentially interested in recruiting. While these opportunities may not be readily available to the lobbying sector, lobbying firms can nevertheless make an inference about the political skills of individuals from the party's recruiting decisions. This information externality also represents an important component of our analysis.

We incorporate these basic considerations into a simple equilibrium model of political recruitment by a party. Potential recruits are heterogeneous with respect to their political skills, and can either enter the political sector and work for the party or work as lobbyists in a perfectly competitive lobbying sector.⁵ The benefit to the political party from recruiting a new politician, which, for example, may be measured by the funds the politician raises on behalf of the party, increases with the political skills of the new recruit, which are known by the party. Political skills are also valuable in the lobbying sector, where the productivity of a lobbyist depends on his skills relative to those of the politicians he has to interact with. The political skills of individuals, however, are not directly observable by lobbying firms.

The objective of the party is to maximize total rents, given by the difference between the funds raised by its recruits and the wages it has to pay them, where each party recruit has to raise at least enough funds to cover his salary. Equilibrium wages in the political sector are determined by the outside option available to individuals to work in the perfectly competitive lobbying sector, where they are paid based on their expected productivity as lobbyists. Since the party knows the political skills of individuals, and lobbying firms can only make a partial inference based on the party's recruiting decisions, the labor market in the lobbying sector is characterized by two wages, depending on whether or not an individual has been recruited by the party. This implies that the labor market in the political sector is characterized by a single wage.

We characterize the party's equilibrium selection rule, which determines the quality of the politicians the party recruits. We find that in equilibrium the party only recruits mediocre

⁵In most modern democracies, while the number of political parties is typically small, the number of lobbying firms runs into thousands.

politicians: that is, the party pursues neither the very best prospects, nor the ones with the lowest political skills, both of whom end up working as lobbyists. The intuition for this result is that the equilibrium selection rule used by the party conveys useful information to the lobbying sector about the productivity of party recruits. This affects the equilibrium wage the party has to pay to its recruits. Politicians with relatively higher skills increase the party's wage and hence make all party recruits more expensive. This equilibrium effect forces the party to forego the opportunity of recruiting the very best politicians. At the same time, it makes individuals with relatively low political skills too expensive compared to the relatively low benefits they generate for the party, thus making it not worthwhile for the party to recruit individuals at the bottom of the distribution of political skills. This result holds in spite of the fact that in principle the party could afford to recruit individuals of all skill levels, including the very best, and these individuals would prefer to become politicians.

We also find that an increase in the productivity of political skills in the lobbying sector relative to the political sector decreases the political skills of the best politician, and makes the party more homogenous with respect to the political skills of its recruits. However, the average quality of the party's recruits and the equilibrium wage paid by the party may either increase or decrease.

Our paper is related to the literature on the endogenous selection of politicians (see, e.g., the survey by Besley (2005)). The two approaches that are prevalent in this literature are based on the "political-agency" framework and the "citizen-candidate" framework. The political-agency framework focuses on the extent to which voters can discipline elected representatives with career concerns in environments with moral hazard and/or adverse selection (e.g., Banks and Sundaram (1993, 1998), Barro (1973), Besley (2006), Ferejohn (1986) and Persson, Roland and Tabellini (1997)). The citizen-candidate framework (e.g., Besley and Coate (1997) and Osborne and Slivinski (1996)), removes the artificial distinction between citizens and politicians, by recognizing that public officials are selected by the citizenry from those citizens who choose to become politicians and stand as candidates in an election in the first place. In particular, Caselli and Morelli (2004) and Messner and Polborn (2004) consider citizen-candidate models where in equilibrium low-quality individuals may be more likely to run for office than high-quality ones. In their models, the value of the outside

opportunities of high-quality individuals exceed the rewards from office, thus discouraging them from running for public office.⁶ This literature, however, abstracts from the role of parties in the selection of politicians.

Our paper is also related to the literature on political parties. Most of the recent literature on parties has tried to "unbundle" these institutions by focusing on specific purposes parties serve, thus providing alternative, complementary rationales for their existence (see, e.g., the survey by Merlo (2006)). These purposes include the mobilization of voters (e.g., Herrera and Martinelli (2006) and Shachar and Nalebuff (1999)), the choice of policy platforms (e.g., Levy (2004), Morelli (2004) and Testa (2004)), and the selection of electoral candidates (e.g., Caillaud and Tirole (2002), Carrillo and Mariotti (2001), Mattozzi and Merlo (2005) and Snyder and Ting (2002)). None of these contributions, however, studies the issue of political recruitment.

Finally, our work relates to the literature on the optimal allocation of talent in an economy (see, e.g., Baumol (1990) and Murphy, Shleifer and Vishny (1991)). This literature studies the effects of incentives on the occupational choice of entrepreneurs, and the aggregate implications of the allocation of entrepreneurial talent between productive and unproductive (e.g., rent-seeking) activities.

The remainder of the paper is organized as follows. In section 2, we present the model, and in Section 3 the results of our analysis. We conclude with Section 4.

⁶The equilibrium mechanisms in the two models are, however, different. In Caselli and Morelli (2004), bad politicians generate a negative externality for good ones, by reducing the prestige associated with holding office, and hence the overall rewards from office. This generates the possibility of multiple equilibria in quality. In Messner and Polborn (2004), as long as the salary of elected officials is relatively low, high-quality individuals free-ride on low-quality ones by not running and letting them run instead.

⁷Other functions performed by parties include the organization and coordination of electoral campaigns (e.g., Osborne and Tourky (2004)), the formation of bargaining coalitions in the legislature (e.g., Jackson and Moselle (2002)), and disciplining the behavior of elected representatives (e.g., Alesina and Spear (1988) and Harrington (1992))

⁸There is also a recent empirical literature that studies the careers of politicians. Diermeier, Keane and Merlo (2005) estimate a dynamic model of the career decisions of the members of the U.S. Congress. Dal Bo, Dal Bo and Snyder (2006) provide an empirical study of the self-perpetuation of political elites in the U.S.

2 The Model

There is a continuum of individuals of measure one who are potentially interested in becoming politicians. The political sector is characterized by a single political party who wants to recruit politicians. There is also a perfectly competitive lobbying sector where a large number of identical firms want to hire lobbyists.

Individuals are heterogenous with respect to their political skills $p \in [0, 1]$, which are uniformly distributed in the population of potential politicians. Each individual knows his own political skills, which are also known by the party, but not by the lobbying firms. The population distribution of political skills is common knowledge. Political skills are productive in both occupations, with relatively more skilled individuals being more productive in each occupation.

If an individual with political skills p joins the political party, he generates benefits f(p) for the party, where $f(\cdot)$ is a strictly increasing and concave fund-raising technology, with f(0) = 0. We assume that when making its recruiting decisions, the objective of the political party is to maximize total rents, given by the difference between the funds raised by its recruits and the wages it has to pay, where each politician has to raise at least enough funds to cover his salary. When deciding whom to recruit the political party takes into account that potential recruits could also work as lobbyists. The competition the political party faces from the lobbying sector determines the (endogenous) wage it has to pay to its recruits.

The lobbying sector is perfectly competitive, and we let $r \in (0, f(1))$ denote the rental price of political skills in the sector.¹⁰ Since lobbyists have to interact with politicians, we assume that an individual is productive as a lobbyist only to the extent that his political skills are at least as high as those of politicians. Hence, if political skills where observable by lobbying firms, a lobbyist with political skills p would receive a wage p if $p \geq p_l$ and 0 otherwise (where p_l denotes the skill level of the worst politician, which is determined in

⁹The uniformity assumption is made here purely for expositional convenience. Mediocracy would also arise in a model with a general distribution for political skills.

 $^{^{10}}$ Equivalently, we may think of the lobbying sector as being characterized by an aggregate, constant returns technology, and r is equal to the marginal product of political skills in the lobbying sector.

equilibrium).¹¹ The restriction r < f(1) guarantees that in principle the party can afford to recruit politicians of all skill levels, including the very best.¹²

Lobbying firms, however, do not directly observe the political skills of individuals. Nevertheless, the party's recruiting decisions convey some information about the political skills of its recruits. In particular, potential employers in the lobbying sector can use the party's recruiting strategy to form expectations about the skills of the party's recruits. Hence, lobbying firms can condition their wage offers to whether or not an individual is being recruited by the party as a politician.

At the heart of the model described here there are two externalities. The first is an externality that the party's recruiting decisions impose on the lobbying sector, induced by the fact that to deal with skilled politicians lobbying firms need skilled lobbyists. The second is an externality that goes in the opposite direction, from the wages in the lobbying sector to the party's recruiting decisions, generated by the fact that potential party recruits may find alternative employment opportunities in the lobbying sector.

3 Results

An equilibrium of the model described in Section 2 consists of an allocation of individuals to occupations and a wage schedule for each occupation such that the individuals, the party, and the lobbying firms are behaving optimally, and the "political labor market" clears. In particular, we restrict attention to situations where, in equilibrium, both the political and the lobbying sector are non-empty (i.e., the party recruits a positive measure of politicians and the remaining individuals work as lobbyists).

We provide necessary and sufficient conditions on the parameters of the model for existence of an equilibrium. We show that if an equilibrium exists it is unique and is a mediocracy equilibrium: the party successfully recruits individuals with political skills in the interval $[p_l, p_h]$, $0 < p_l < p_h < 1$, while individuals with political skills $p \in [0, p_l) \cup (p_h, 1]$ work in the

¹¹This assumption captures the idea that an effective lobbyist cannot be "dumber" than the "dumbest" politician.

 $^{^{12}}$ If r > f(1), then the choice of the party not to recruit individuals with the highest political skills would be a direct consequence of the assumption.

lobbying sector.¹³ In equilibrium, the average quality of politicians may be either higher or lower than the average quality of lobbyists. Moreover, the higher the rental price of political skills in the lobbying sector (i.e., the higher r), the more homogeneous the party (i.e., the smaller the interval $[p_l, p_h]$), and the lower the quality of the most skilled politician (i.e., the lower p_h). On the other hand, the quality of the worst politician, p_l , and the average quality of politicians, $(p_l + p_h)/2$, may either increase or decrease with r.

Before we characterize the equilibrium, we begin by describing its main features. Suppose that the party tries to recruit only individuals with political skills $p \in [p_l, p_h] \subseteq [0, 1]$. Since potential employers in the lobbying sector can use the party's recruiting strategy to form expectations about the skills of the party's recruits, the lobbying sector will therefore offer two wages depending on whether or not individuals are being recruited by the party. Let w_{in} and w_{out} denote the two wages, respectively. Since the lobbying sector is competitive, we have that

$$w_{in} = \frac{r}{p_h - p_l} \int_{p_l}^{p_h} p dp = r \left(\frac{p_l + p_h}{2} \right), \tag{1}$$

and

$$w_{out} = \frac{r}{1 - (p_h - p_l)} \int_{p_h}^{1} p dp = r \left(\frac{1 - p_h^2}{2 \left(1 - (p_h - p_l) \right)} \right). \tag{2}$$

Note that as long as $p_l > 0$, individuals with political skills $p < p_l$ who are not being recruited by the party are not productive in the lobbying sector. However, as long as $p_h < 1$, the lobbying firms do not know who these individuals are.

In order to be successful in its attempt to recruit individuals with political skills $p \in [p_l, p_h]$, the party must therefore offer these individuals a wage of at least w_{in} , which represents their outside option in the lobbying sector. Since the outside option is the same for all such individuals, the wage the party will offer to all its potential recruits is then exactly equal to w_{in} . Furthermore, since each politician must generate a non-negative rent for the party, it has to be the case that $f(p_l) \geq w_{in}$. Total rent maximization by the party implies that $f(p_l) = w_{in}$. It follows that the maximization problem of the political party can be

¹³Throughout the analysis, we rule out the possibility of "atoms" in the skill distribution of politicians and lobbyists. In particular, the set of politicians and the set of lobbyists must each be a finite union of non-degenerate intervals in [0,1].

written as:

$$\max_{0 \le p_l \le p_h \le 1} \int_{p_l}^{p_h} (f(p) - w_{in}) dp$$
s.t. $f(p_l) = w_{in}$. (3)

Note that using (1), $f(p_l) = w_{in}$ implies

$$p_h(p_l) = \frac{2}{r} f(p_l) - p_l \ge p_l.$$
 (4)

Hence, it must be the case that $p_l > 0$, since

$$\int_{p_{l}}^{\frac{2}{r}f(p_{l})-p_{l}} (f(p)-w_{in}) dp > 0$$

if and only if $p_l > 0$, which also implies that $p_h > p_l$ and $w_{in} > 0$. Next, note that it must also be that $p_h < 1$. Otherwise, if $p_h = 1$, the only individuals who are not being recruited by the party have political skills $p \in [0, p_l)$, and are therefore not productive in the lobbying sector. It follows from (2) that in this case $w_{out} = 0$, and hence no firm would operate in the lobbying sector. Finally, since all politicians are paid the same by the party, strict concavity of f(p) implies that the party will only try to recruit those individuals whose political skills are in the interval $[p_l, p_h]$.

The following proposition characterizes the equilibrium.

Proposition 1: There exist \underline{r} and \overline{r} such that a unique equilibrium exists if and only if $r \in (\underline{r}, \overline{r}]$. In equilibrium, the party recruits politicians with skills $p \in [p_l, p_h]$, $0 < p_l < p_h < 1$, and lobbying firms hire lobbyists with skills $p \in [0, p_l) \cup (p_h, 1]$, where p_l and p_h jointly solve

$$\begin{cases} p_h(p_l) &= \frac{2}{r}f(p_l) - p_l, \\ (f(p_h) - f(p_l))p'_h(p_l) &= f'(p_l)(p_h - p_l). \end{cases}$$

Furthermore, politicians are paid w_P and lobbyists are paid w_L , where

$$w_P = r\left(\frac{p_l + p_h}{2}\right) \ge r\left(\frac{1 - p_h^2}{2\left(1 - (p_h - p_l)\right)}\right) = w_L.$$

The proof of Proposition 1 is contained in the Appendix. In equilibrium, the party chooses not to hire the best potential politicians because of the effect that hiring them generates on

the wage the party has to pay to all its recruits. Also, the party does not hire the worst potential politicians because they would not raise enough funds for the party to justify their salary. The party recruit with the lowest quality generates zero rents for the party (i.e., he raises as much funds for the party as the salary the party has to pay him). The rents generated by all other party recruits are positive and increasing in their political skills. The quality of the best party recruit is determined by an indifference condition that equalizes the increase in the party's total rents he generates to the increase he induces in the salary the party has to pay to all its recruits.

The bounds on r that guarantee existence of an equilibrium are explained by the following considerations. The rental price of political skills in the lobbying sector measures the extent of the competition the party faces for political talent, and hence the strength of the wage externality the lobbying sector imposes on the party. If r is too low, the presence of the lobbying sector has a negligible effect on the party's recruiting decisions. In particular, the wage externality generated from recruiting the best possible politicians (i.e., individuals with political skills p=1), would not be large enough to discourage the party from pursuing them, and only individuals with relatively low political skills would be willing to accept employment in the lobbying sector. However, since these individuals would not be productive as lobbyists, the lobbying sector would remain empty. If, on the other hand, the party is facing fierce competition from the lobbying sector for its potential recruits (i.e., r is too high), the party would only be willing to recruit politicians with very low quality, and pay them a wage that is lower than the one paid by the lobbying sector. Hence, nobody would be willing to become a politician, and the party would remain empty. In fact, in equilibrium, it must be the case that politicians who are recruited by the party earn no less than individuals who accept employment in the lobbying sector. If this were not the case, then people would be better off by hiding their political skills from the party.

If we let μ_P and μ_L denote the average skills of politicians and lobbyists, respectively, we have that in equilibrium

$$\mu_P = \frac{1}{p_h - p_l} \int_{p_l}^{p_h} p dp = \left(\frac{p_l + p_h}{2}\right),$$

and

$$\mu_L = \frac{1}{1 - (p_h - p_l)} \left(\int_0^{p_l} p dp + \int_{p_h}^1 p dp \right) = \frac{1 - (p_h^2 - p_l^2)}{2 \left(1 - (p_h - p_l) \right)},$$

where p_l and p_h are characterized in Proposition 1. Hence, $\mu_P \ge \mu_L$ if and only if $p_l \ge 1 - p_h$, or $\mu_P \ge 1/2$. Whether or not the average quality of party recruits is higher than the average quality of all potential politicians depends on the fund-raising technology $f(\cdot)$ as well as the rental price of political skills in the lobbying sector r.

The next proposition establishes three equilibrium comparative statics results.

Proposition 2: In equilibrium: (i) $\frac{dp_h}{dr} < 0$; (ii) $\frac{dp_l}{dr} \ge 0$ if and only if $w_P - (f(p_h) - w_P) - p'_h(p_l) \frac{f'(p_h)}{f'(p_l)} w_P \ge 0$; and (iii) if $\frac{dp_l}{dr} < 0$, then $\left| \frac{dp_h}{dr} \right| > \left| \frac{dp_l}{dr} \right|$.

The proof of Proposition 2 is also contained in the Appendix. Result (i) follows immediately from a "revealed profitability" argument. Since the net marginal rent generated by the party recruit with the highest quality p_h is equal to zero in equilibrium (i.e., the increase in the party's total rents directly generated by p_h is equal to the rent reduction caused by the indirect effect of recruiting p_h on the party's wage w_P), if the externality becomes stronger (i.e., if r increases), an individual with quality p_h would no longer be a desirable party recruit.

To interpret result (ii) it is useful to note that, since in equilibrium $w_P = f(p_l)$, the quality of the worst party recruit p_l is weakly increasing in r if and only if the salary paid by the party weakly increases when the wage externality from the lobbying sector becomes stronger. An increase in r has three effects on the party's marginal rents, that correspond to the three terms in the expression

$$w_P - (f(p_h) - w_P) - p'_h(p_l) \frac{f'(p_h)}{f'(p_l)} w_P.$$

The first two effects are a direct consequence of the revealed profitability argument illustrated above: since the individual with quality p_h is no longer desirable, the party saves the cost of recruiting him, w_P , but loses the rents he was generating, $f(p_h) - w_P$. The third effect is the marginal cost of adjusting the size and composition of the party following an increase in the wage externality. This "recruiting adjustment cost" is equal to the marginal cost of recruiting, w_P , times the marginal rate at which the party is willing to substitute politicians with high quality with low quality ones, $p'_h(p_l) f'(p_h) / f'(p_l)$, where $p'_h(p_l)$ reflects the fact

that p_l and p_h are linked in equilibrium. If the combined effect of an increase in r on the party's marginal rents is positive, then it is optimal for the party to increase its salary to "hold on" to relatively skilled individuals, which entails an increase in the quality of the worst party recruit. If, on the other hand, the combined effect is negative, then it is optimal for the party to lower its salary and replace relatively skilled politicians with unskilled ones. In this case, an equilibrium reinforcement effect results in a larger drop in the quality of the best party recruit than in the quality of the worst one (result (iii)).

An immediate implication of results (i) and (iii) in Proposition 2 is that as r increases the party becomes more homogeneous with respect to the quality of its recruits (i.e., $p_h - p_l$ decreases). Also, the average quality of party recruits μ_P can either increase or decrease with r. Clearly, if $dp_l/dr \leq 0$, then the average quality decreases. On the other hand, when $dp_l/dr > 0$, it may either decrease or increase depending on the relative desirability of skilled politicians. In general, the equilibrium relationship between μ_P and r depends on the fund-raising technology $f(\cdot)$.

To illustrate some of the results, consider the following parametric example. Let the fund-raising technology f(p) be described by the piece-wise linear function

$$f(p) = \begin{cases} \alpha p & \text{if } p < \frac{1-\beta}{\alpha-\beta} \\ 1 - \beta + \beta p & \text{if } p > \frac{1-\beta}{\alpha-\beta}, \end{cases}$$

where $\alpha > 1 > r > \beta \ge 0$. In the unique equilibrium, we have that

$$p_{l} = \frac{(1-\beta)\left(\frac{2\alpha}{r}-1\right)}{\left(\frac{2\alpha}{r}-1\right)\left(2\alpha-\beta\left(\frac{2\alpha}{r}-1\right)\right)-\alpha},$$

$$p_h = \frac{(1-\beta)\left(\frac{2\alpha}{r}-1\right)^2}{\left(\frac{2\alpha}{r}-1\right)\left(2\alpha-\beta\left(\frac{2\alpha}{r}-1\right)\right)-\alpha},$$

and

$$\mu_P = \frac{\frac{\alpha}{r} (1 - \beta) \left(\frac{2\alpha}{r} - 1\right)}{\left(\frac{2\alpha}{r} - 1\right) \left(2\alpha - \beta \left(\frac{2\alpha}{r} - 1\right)\right) - \alpha}.$$

In the table below, we let $\alpha = 1.1$ and r = 0.98, and we report the equilibrium values of p_l , p_h , and μ_P and their comparative statics with respect to r for four different parameter values for β .

By holding α constant, different values of β correspond to different situations with respect to the relative productivity of politicians with different levels of political skills from the point of view of the party. When β is relatively small, politicians with relatively high skills (i.e. individuals with political skills $p > (1 - \beta) / (\alpha - \beta)$), are very similar with respect to the amount of funds they raise for the party. As β increases, differences in their relative productivity increases. Hence, when for example $\beta = 0.1$, even if an increase in r makes the individual with skills p_h no longer desirable as a party recruit (because of the revealed profitability argument explained above), an individual with quality slightly below p_h is almost as good as p_h with respect to the funds he raises for the party, and at the same time has a smaller effect on the party's wage. As a consequence, even though it is optimal for the party to lower its standards with respect to the quality of its best recruits, the party has a strong incentive to still recruit relatively skilled politicians, while becoming necessarily more choosy with respect to individuals with relatively low skills, thus increasing the quality of its worst recruits. Overall, this results in an increase in the equilibrium average quality of the politicians the party recruits. As β gets larger, the incentives for the party to continue to pursue potential recruits with relatively high political skills following an increase in r become weaker, and the equilibrium average quality of its recruits start to decrease. Eventually (e.g., when $\beta = 0.8$), the party also lowers its standards with respect to the quality of its worst recruits. Also note that, unlike in the other cases, when $\beta = 0.95$, the equilibrium average quality of the party's recruits is lower than the average quality of lobbyists, and hence lower than the average quality of all potential politicians.

4 Concluding Remarks

In this paper, we have focused on the recruiting of politicians by political parties, which plays an important role in shaping the political class in many advanced democracies. We have proposed a simple model of political recruitment where in equilibrium a party deliberately chooses to recruit only mediocre politicians, in spite of the fact that the party could afford to recruit the best political talent available. We argue that this may in part explain the observation that in many countries politicians are typically not "the cream of the crop." Our analysis has highlighted several important aspects of the relationship between the political sector and the lobbying sector that may contribute to the emergence of mediocracy.

Our analysis generates a number of interesting implications that are potentially testable. For example, an implication of our framework is that entry level wages in the lobbying sector should not be higher than those of party professionals at a comparable stage of their careers. A careful empirical investigation of this issue would require individual level data on the earnings of party professionals and lobbyists in several countries with strong party organizations, and is beyond the scope of this paper.¹⁴ Nevertheless, casual observations provide at least some suggestive evidence that supports our claim. Italy, for example, is a country with a strong party system, where the political arena is dominated by party professionals, and the lobbying sector is predominantly characterized by trade union organizations. In Italy, the average monthly earnings of a party official (i.e., "funzionario di partito") and a union official ("sindacalista") are equal to about 5,000 and 3,000 Euros, respectively.¹⁵ Similarly in the U.K., which is another country where political recruitment by parties determines to a large extent the pool of politicians, the average annual starting salaries of a lobbyist and a party professional are about 18,000 and 24,000 Pounds, respectively.¹⁶

¹⁴Unfortunately, such data are currently unavailable, even at the aggregate level, and collecting this information would provide a very useful resource for empirical research in this area.

¹⁵These amounts refer to party and union officials at the national level. At the regional level, the two amounts are comparable, and are equal to about 2,000 Euros per month. We obtained this information by conducting a phone survey of party and union organizations in Italy. Similar figures can be obtained from the (publicly available) budgets of several parties and unions, by dividing their total wage costs net of the wages of secretaries and staff, by the number of officials they employ.

¹⁶These figures were obtained from job postings available online at www.prospects.ac.uk, the U.K.'s official

Another interesting implication of our analysis is that the average quality of politicians may either increase or decrease with the level of competition the political sector faces from the lobbying sector for political talent, depending on the shape of the fund-raising technology in the political sector. This finding suggests that the estimation of the "production functions" of the political and the lobbying sector of a country may convey important information about the quality of its political class and the industrial organization of politics. We intend to pursue this line of research in future work.

Appendix

Proof of Proposition 1: First, note that $p_h(p_l) < 1$ if and only if $p_l < \overline{p_l}$, where $\overline{p_l}$ is implicitly defined by

$$\frac{2}{r}f\left(\overline{p_l}\right) - \overline{p_l} = 1,$$

and existence and uniqueness of $\overline{p_l}$ follow from $p_h(0) = 0$, $p_h(1) > 1$, and $p_h''(p_l) < 0$. Moreover, $\lim_{r\to 0} \overline{p_l} = 0$, and $\lim_{r\to f(1)} \overline{p_l} = \widehat{p_l} \in (0,1]$. Second, by using (1) and (2), we have that $w_{in} = w_P \ge w_L = w_{out}$ if and only if

$$p_l\left(1+p_l\right) \ge 1-p_h\left(p_l\right),\,$$

that is equivalent to

$$\frac{2}{r}f\left(p_{l}\right) + p_{l}^{2} \ge 1.$$

Hence, it must be the case that $p_l \geq \underline{p_l} \in (0, \overline{p_l})$, where $\underline{p_l}$ is the unique solution to

$$\frac{2}{x}f\left(\underline{p_l}\right) = 1 - \underline{p_l}^2,$$

which is increasing in r. By using (3) and (4), it follows that an equilibrium is fully characterized by the solution of the maximization problem

$$\max_{p_{l} \in \left[\underline{p_{l}}, \overline{p_{l}}\right)} \int_{p_{l}}^{\frac{2}{r} f(p_{l}) - p_{l}} \left(f\left(p\right) - f\left(p_{l}\right)\right) dp, \tag{5}$$

and by taking the first order condition we get

$$(f(p_h) - f(p_l)) p'_h(p_l) - f'(p_l) (p_h - p_l) = 0.$$
(6)

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Since concavity of $f(\cdot)$ implies that

$$f'(p_l) > \frac{f(p_h) - f(p_l)}{p_h - p_l} > f'(p_h),$$

a solution to (6) exists only if $p'_h(p_l) > 1$, and $p'_h(p_l) < f'(p_l)/f'(p_h)$. To see that (6) is also a sufficient condition, notice that the second order condition is

$$f'(p_h)(p'_h(p_l))^2 - f'(p_l)(2p'_h(p_l) - 1) + \frac{2}{r}f''(p_l)(f(p_h) - rp_h).$$
 (7)

The last term of (7) is negative since $f(\cdot)$ is concave, and $f(p_h) - rp_h > 0$ (recall that f(0) = 0, and r < f(1)). Regarding

$$f'(p_h)(p'_h(p_l))^2 - f'(p_l)(2p'_h(p_l) - 1),$$
 (8)

we have that $p'_h(p_l) < f'(p_l)/f'(p_h)$ implies that (8) is decreasing in $p'_h(p_l)$. Hence $p'_h(p_l) > 1$ implies that

$$f'(p_h)(p'_h(p_l))^2 - f'(p_l)(2p'_h(p_l) - 1) < f'(p_h) - f'(p_l) < 0,$$

where the last inequality follows from concavity of $f(\cdot)$. The fact that when (6) holds (7) is negative, implies that if a solution to (6) exists it must be unique. Therefore, if a mediocracy equilibrium exists, it is unique and completely characterized by (4) and (6). Necessary and sufficient conditions for existence are:

$$(f(1) - f(\overline{p_l})) p'_h(\overline{p_l}) - f'(\overline{p_l}) (1 - \overline{p_l}) < 0,$$

and

$$(f(p_h(\underline{p_l})) - f(\underline{p_l})) p'_h(\underline{p_l}) - f'(\underline{p_l}) (p_h(\underline{p_l}) - \underline{p_l}) \ge 0.$$

Using the fact that

$$p'_{h}(p_{l}) = \frac{2}{r}f'(p_{l}) - 1,$$

and defining the function

$$Q(p_l) \equiv \frac{2f'(p_l) \frac{f(p_h(p_l)) - f(p_l)}{p_h(p_l) - p_l}}{f'(p_l) + \frac{f(p_h(p_l)) - f(p_l)}{p_h(p_l) - p_l}},$$

which is strictly decreasing in p_l , we can rewrite the above inequalities as

$$Q\left(\overline{p_l}\right) < r \le Q\left(\underline{p_l}\right).$$

Finally, since $\overline{p_l}$ is a function of r, we need to show that $r = Q(\overline{p_l})$ admits a solution. Otherwise, an equilibrium would never exist. Since $\overline{p_l}$ is increasing in r, $Q(\overline{p_l})-r$ is decreasing in r, and

$$\lim_{r \to 0} Q(\overline{p_l}) - r = \frac{2f'(0) f(1)}{f'(0) + f(1)} > 0,$$

we have that $r = Q(\overline{p_l})$ admits a solution if an only if

$$\lim_{r \to f(1)} \left(Q\left(\overline{p_l}\right) - r \right) = \frac{2f'\left(\widehat{p_l}\right) \frac{f(1) - f(\widehat{p_l})}{1 - \widehat{p_l}}}{f'\left(\widehat{p_l}\right) + \frac{f(1) - f(\widehat{p_l})}{1 - \widehat{p_l}}} - f\left(1\right) < 0.$$

Note that a (sufficient) condition for the inequality above to be verified is that $\hat{p}_l = 1$. In this case,

$$\lim_{r \to f(1)} \left(Q\left(\overline{p_l}\right) - r \right) = \lim_{r \to f(1)} \frac{2f'\left(\overline{p_l}\right) \frac{f(1) - f(\overline{p_l})}{1 - \overline{p_l}}}{f'\left(\overline{p_l}\right) + \frac{f(1) - f(\overline{p_l})}{1 - \overline{p_l}}} - f\left(1\right) = f'\left(1\right) - f\left(1\right) < 0,$$

where we used the fact that

$$\lim_{r \to f(1)} \frac{f(1) - f(\overline{p_l})}{1 - \overline{p_l}} = \lim_{r \to f(1)} f'(\overline{p_l}) = f'(1).$$

Note that $\widehat{p}_{l} = 1$ occurs when f'(1)/f(1) > 1/2. By defining

$$\overline{r} \equiv Q\left(\underline{p_l}\right)$$
,

and

$$\underline{r} \equiv \begin{cases} Q(\overline{p_l}) & \text{if } \lim_{r \to f(1)} (Q(\overline{p_l}) - r) < 0 \\ R \ge f(1) & \text{otherwise,} \end{cases}$$

concludes the proof.

Proof of Proposition 2: Taking derivatives of (6) we obtain

$$\frac{dp_{l}}{dr} = \frac{2}{r^{2}}f'(p_{l})\frac{w_{in} - (f(p_{h}) - w_{in}) - p'_{h}(p_{l})\frac{f'(p_{h})}{f'(p_{l})}w_{in}}{-f'(p_{h})(p'_{h}(p_{l}))^{2} + f'(p_{l})(2p'_{h}(p_{l}) - 1) - \frac{2}{r}f''(p_{l})(f(p_{h}) - rp_{h})},$$

and

$$\frac{dp_h}{dr} = -\frac{2}{r^2}w_{in} + p'_h(p_l)\frac{\partial p_l}{\partial r}.$$

Since $p'_{h}(p_{l}) > 1$, (ii) and (iii) follow immediately. Furthermore, since

$$\frac{dp_l}{dr} < \frac{2}{r^2} \frac{w_{in}}{p_h'(p_l)},$$

(i) also follows.

REFERENCES

- [1] Alesina, Alberto, and Stephen E. Spear, 1988. "An Overlapping Generations Model of Electoral Competition," *Journal of Public Economics*, 37, 359-379.
- [2] Banks, Jeffrey S., and Rangarajan K. Sundaram, 1993. "Adverse Selection and Moral Hazard in a Repeated Elections Model," ch. 12, pp. 295-311, in Barnett, W. A., Inich, M. J., Schofield, N. J. (eds.), Political Economy: Institutions, Competition and Representation. Cambridge: Cambridge University Press.
- [3] Banks, Jeffrey S., and Rangarajan K. Sundaram, 1998. "Optimal Retention in Agency Problems," *Journal of Economic Theory*, 82, 293-323.
- [4] Barro, Robert J., 1973. "The Control of Politicians: An Economic Model," *Public Choice*, 14, 19-42.
- [5] Baumol, William J., 1990. "Entrepreneurship: Productive, Unproductive, and Destructive," *Journal of Political Economy*, 98, 893-921.
- [6] Besley, Timothy, 2005. "Political Selection," Journal of Economic Perspectives, 19, 43-60.
- [7] Besley, Timothy, 2006. Principled Agents? The Political Economy of Good Government.

 Oxford: Oxford University Press.
- [8] Besley, Timothy, and Stephen Coate, 1997. "An Economic Model of Representative Democracy," Quarterly Journal of Economics, 112, 85-114.
- [9] Best, Heinrich, and Maurizio Cotta, 2000. Parliamentary Representatives in Europe 1848-2000: Legislative Recruitment and Careers in Eleven European Countries. Oxford: Oxford University Press.
- [10] Caillaud, Bernard, and Jean Tirole, 2002. "Parties as Political Intermediaries," Quarterly Journal of Economics, 117, 1453-1489.

- [11] Carrillo, Juan D., and Thomas Mariotti, 2001. "Electoral Competition and Political Turnover," European Economic Review, 45, 1-25.
- [12] Caselli, Francesco, and Massimo Morelli, 2004. "Bad Politicians," Journal of Public Economics, 88, 759-782.
- [13] Cotta, Maurizio, 1979. Classe Politica e Parlamento in Italia. Bologna: Il Mulino.
- [14] Dal Bo, Ernesto, Dal Bo, Pedro and Jason Snyder, 2006. "Political Dynasties," Working Paper, Haas School of Business, University of California, Berkeley.
- [15] Diermeier, Daniel, Keane, Michael, and Antonio Merlo, 2005. "A Political Economy Model of Congressional Careers," American Economic Review, 95, 347-373.
- [16] Ferejohn, John A., 1986. "Incumbent Performance and Electoral Control," Public Choice, 50, 5-25.
- [17] Harrington, Joseph E. Jr., 1992. "The Role of Party Reputation in the Formation of Policy," *Journal of Public Economics*, 49, 107-121.
- [18] Herrera, Helios, and Cesar Martinelli, 2006. "Group Formation and Voter Participation," *Theoretical Economics*, 1, 461-487.
- [19] Jackson, Matthew O., and Boaz Moselle, 2002. "Coalition and Party Formation in a Legislative Voting Game," Journal of Economic Theory, 103, 49-87.
- [20] Levy, Gilat, 2004. "A Model of Political Parties," Journal of Economic Theory, 115, 250-277.
- [21] Mattozzi, Andrea, and Antonio Merlo, 2005. "Political Careers or Career Politicians?" Working Paper, Department of Economics, University of Pennsylvania.
- [22] Merlo, Antonio. 2006. "Whither Political Economy? Theories, Facts and Issues." In Advances in Economics and Econometrics, Theory and Applications: Ninth World Congress of the Econometric Society, ed. Richard Blundell, Whitney Newey and Torsten Persson, Vol. 1, 381-42. Cambridge: Cambridge University Press.

- [23] Messner, Matthias, and Mattias Polborn, 2004. "Paying Politicians," *Journal of Public Economics*, 88, 2423-2445.
- [24] Morelli, Massimo, 2004. "Party Formation and Policy Outcomes under Different Electoral Systems," Review of Economic Studies, 71, 829–853.
- [25] Murphy, Kevin M., Andrei Shleifer and Robert W. Vishny, 1991. "The Allocation of Talent: Implications for Growth," *Quarterly Journal of Economics*, 106, 503-530.
- [26] Norris, Pippa, 1997. Passages to Power: Legislative Recruitment in Advanced Democracies. Cambridge: Cambridge University Press.
- [27] Norris, Pippa and Joni Lovenduski, 1995. Political Recruitment: Gender, Race and Class in the British Parliament. Cambridge: Cambridge University Press.
- [28] Osborne, Martin J., and Al Slivinski, 1996. "A Model of Political Competition with Citizen-Candidates," *Quarterly Journal of Economics*, 111, 65-96.
- [29] Osborne, Martin J., and Rabee Tourky, 2004. "Party Formation in Single-Issue Politics," Working Paper, Department of Economics, University of Toronto.
- [30] Persson, Torsten, Roland, Gerard, and Guido Tabellini, 1997. "Separation of Powers and Political Accountability," *Quarterly Journal of Economics*, 112, 1163-1202.
- [31] Rydon, Joan, 1986. A Federal Legislature: The Australian Commonwealth Parliament, 1901-80. Melbourne: Oxford University Press.
- [32] Shachar, Ron, and Barry Nalebuff, 1999. "Follow the Leader: Theory and Evidence on Political Participation," *American Economic Review*, 89, 525–547.
- [33] Snyder, James M. Jr., and Michael M. Ting, 2002. "An Informational Rationale for Political Parties," *American Journal of Political Science*, 46, 90-110.
- [34] Testa, Cecilia, 2004. "Party Polarization and Electoral Accountability," Working Paper, Department of Economics, Royal Holloway University of London.
- [35] Tribe, David, 1975. The Rise of the Mediocracy. London: George Allen & Unwin.