Why and when do businessmen run for public office rather than rely upon other means of influence? What are the implications of their participation for public policy? We show formally that “businessman candidacy” and public policy are jointly determined by the institutional environment. When institutions that hold elected officials accountable to voters are strong, businessmen receive little preferential treatment and are disinclined to run for office. When such institutions are weak, businessmen can subvert policy irrespective of whether they hold office, but they may run for office to avoid the cost of lobbying elected officials. Evidence from Russian gubernatorial elections supports the model’s predictions. Businessman candidates emerge in regions with low media freedom and government transparency, institutions that raise the cost of reneging on campaign promises. Among regions with weaker institutions, professional politicians crowd out businessmen when the rents from office are especially large.

Roman Abramovich, one of Russia’s richest men, took time off from work in 2000 to run for governor of Chukotka, a region in the Russian Far East. He won that race, but he did not retire from business: throughout his eight years in office, Abramovich maintained his vast holdings across varied sectors. His political participation was far from unique. Between 1991 and 2005, as documented below, 247 businessmen participated as candidates in 259 gubernatorial elections in Russia. More generally, businessmen are involved at all levels of politics, with the magazine Forbes characterizing Russia’s government as the “world’s richest.”1 For Russian businessmen, running for public office has been normal activity.

The career of Leland Stanford, one of the richest men in nineteenth-century America, was similar in important respects to Abramovich’s. Shortly after founding the Central Pacific Railroad Company in 1861, Stanford ran for and won gubernatorial office in California. He occupied the presidency of Central Pacific Railroad throughout his term as governor and later tenure in the U.S. Senate. He too was representative of his era. A study of the careers of 53 railroad presidents found that more than half held public office (Crandall 1950). For the railroad magnates of the nineteenth century, serving in politics was typical behavior.

Why and when do businessmen like Abramovich and Stanford run for public office rather than rely upon other means of influence? What are the implications of their participation for public policy? We address these and related questions in this article, focusing on the quality of democratic institutions that hold elected officials accountable to voters.

The elected government bodies of the late nineteenth-century United States and postcommunist Russia, like those of many other countries with weak democratic
The lesson is general. In the presence of institutions that increase the accountability of elected officials, special interests have limited ability to influence public policy, and there is less incentive for representatives of those interests to run for public office. When these institutions are weak or absent, then there can be sizeable rents from holding elected office, and representatives of special interests may run for office to capture those rents. Institutional context therefore shapes not only public policy but also political participation (Bartels and Brady 2003), such that any observed correlation between participation and policy may reflect not a causal relationship but the underlying institutional environment.

We focus especially on the consequences of variation in the strength of institutions that hold politicians accountable for promises made during election campaigns. Free media and government transparency help voters to identify the relationship between electoral promises and actions once in office, thus increasing the probability that elected officials who break their campaign promises will not be reelected (e.g., Besley and Prat 2006; Besley and Prat 2006; Reinikka and Svensson 2005). Similarly, strong political parties may exercise control over their members and punish those who behave opportunistically once in office (for example, by not supporting their reelection bid or aspirations for higher office; e.g., Aldrich 1995; Alesina and Spear 1988; Cox and McCubbins 1994). The political economy literature stresses that such institutions may be particularly weak in relatively young democracies (e.g., Keefer 2007; Robinson and Verdier 2002), though within-country variation in the strength of democratic institutions is often substantial. We exploit such variation in an empirical examination of “businessman candidacy” in postcommunist Russia.

We demonstrate our argument with a simple model that incorporates electoral competition and postelection policy choice. As in the “citizen candidate” models of Osborne and Sivinski (1996) and Besley and Coate (1997), entry in our model is endogenous: at some cost, both professional politicians and businessmen may enter the race. In a departure from these models, we compare outcomes across institutional environments by exploring not only the case where campaign promises are not binding (the typical environment in the citizen-candidate literature, which we interpret as corresponding to weak democratic institutions), but also that in which they are binding (the typical environment in Downsian models of electoral competition, which we interpret as corresponding to strong democratic institutions). At stake is a policy over which businessmen have conflicting preferences. Businessmen can influence policy in two ways: by lobbying the election winner for favorable policy treatment...
The key assumption of the model is that a businessman’s opportunity cost of running for public office is higher than a professional politician’s. Unlike politicians, businessmen also have businesses to run while campaigning for public office. Campaigning requires enormous time and effort, both of which must be diverted from business. Studies of U.S. politics suggest that such opportunity costs can be large enough to bias representation in state legislatures against the Republican Party, as potential Republican candidates are more likely than potential Democratic candidates to have lucrative careers in business and other professions (e.g., Fiorina 1994, 1999). Moreover, businessmen may need to spend additional time and money to overcome any advantage in political skill enjoyed by professional politicians (Diermeier, Keane, and Merlo 2005). Given these considerations, the rents from holding office necessary for a businessman to run are greater than those for a professional politician to participate in the race.

The model produces two key results. First, businessmen are less likely to run for elected office if institutions that hold elected officials accountable to voters are strong. When campaign promises constrain postelection behavior (i.e., when democratic institutions are strong), the logic of political competition encourages businessmen and politicians to adopt similar platforms. Given differences in opportunity costs of electoral participation, businessmen sit out the race and, if necessary, pay professional politicians to run in their place. In contrast, when campaign promises are not binding (i.e., when democratic institutions are weak), the election winner has power to set policy in accordance with his preferences and those of businessmen who may provide contributions in return for favorable treatment. Businessmen may run to save the cost of lobbying the election winner and to acquire additional rents by being on the receiving end of the lobbying process. In equilibrium, policy is the same regardless of the election winner, though the distribution of rents is not.

Second, when campaign promises are not binding (i.e., when democratic institutions are weak), businessman candidates are less likely when the returns to businessmen from policy influence are especially high. This paradoxical result follows from the nature of policy choice when campaign promises are not binding. With the election winner able to earn rents by granting or denying favors to businessmen, there is a gain from holding office for professional politicians as well as businessmen. Given professional politicians’ lower opportunity costs of running, businessmen are thus crowded out of the race when returns from policy influence are large.

The article tests the predictions of the model using a comprehensive database on the business affiliation of all Russian gubernatorial candidates between 1991 and 2005. Russia provides an ideal setting for such a test: democratic institutions are generally weak, implying favorable conditions for businessman candidacy, yet there is substantial variation across regions in both the quality of these institutions and in the potential returns to policy influence. Regarding the first prediction, two measures of the regional institutional environment—media freedom and government transparency—are negatively associated with the likelihood of businessman candidacy. As both media freedom and government transparency raise the cost of reneging on campaign promises, this supports the hypothesis that businessmen candidates are less likely when campaign promises constrain postelection behavior. The strength of political parties, defined as the degree to which parties control the nomination process for parliamentary candidates, does not have a robust significant effect on businessman candidacy, but the sign of the effect is always as predicted. Regarding the second prediction, there is evidence of a crowding-out effect in the presence of weak institutions: returns from policy influence, proxied by the share of regional employment in resource extraction, are negatively associated with the incidence of businessman candidacy when media are unfree and government nontransparent.

This study builds on a large body of recent work on “politically connected firms” (e.g., Faccio 2006; Fisman...
BUSINESSMAN CANDIDATES

A Simple Model of Businessman Candidacy Environment

This section presents a simple model to demonstrate the impact of democratic institutions on the political participation of businessmen and on public policy. Assume a political economy populated by a large but finite number of businessmen, a large but finite number of politicians, and a continuum of voters. Both businessmen and politicians choose whether to run for office; below we discuss the possibility that businessmen may contract with politicians to enter the race. At issue in the election are policies important to businessmen, who may lobby the election winner when that individual is unconstrained by campaign promises. Businessmen have conflicting preferences over these policies. To focus on this conflict of interest, and to transparently characterize equilibrium when campaign promises are not binding (i.e., when policy is determined by bargaining between businessmen and the election winner), we assume that politicians are indifferent over the set of policies. This assumption may be easily derived from first principles by assuming that businessmen and politicians each maximize rents, but that businessmen have businesses whereas politicians do not. As we discuss below, our results are robust to some relaxation of this assumption.

Both businessmen and politicians desire holding office for its own sake, and both receive an exogenous payoff (e.g., formal compensation) if they win the election. Depending on the institutional environment, they may also value holding office for the opportunity it provides to earn rents through control of the policy process, a consideration discussed below. Businessmen and politicians differ in their opportunity cost of running, where any businessman incurs a cost of \( \kappa > 0 \) if he runs, whereas any politician incurs a cost of \( \delta > 0 \) if he runs. The key assumption of the model is that running for office is more costly for businessmen than for politicians. Assume in particular that \( \delta < \frac{\kappa}{2} < \kappa \). This assumption implies that if only the exogenous payoff from holding office is at stake, then a politician prefers to enter a race that he has a 50-50 chance of winning, but a businessman does not.

Assume some arbitrary policy space \( X \), refer to any particular policy as \( x \), and denote by \( u_i(x) \) the utility that any businessman \( i \) receives from policy \( x \). To ensure a unique outcome to the lobbying game described below, assume that for all subsets \( B \) of the set of all businessmen from which no more than one businessman is missing, the solution to \( \max_x \sum_{i \in B} u_i(x) \) is uniquely defined. In addition, assume that there is a conflict of interest among businessmen, in the sense that any policy that neglects the interests of only one businessman makes all other businessmen weakly better off, relative to the policy implemented when the interests of all businessmen are taken into account. Formally, for each businessman \( i \) and \( j \), with \( i \neq j \), \( u_i(x_{-j}) \geq u_i(\bar{x}) \), where \( x_{-j} \equiv \arg \max_x \sum_{k \neq j} u_k(x) \) and \( \bar{x} \equiv \arg \max_x \sum_k u_k(x) \).

Voters have preferences over policies in \( X \) and vote for the candidate whose expected policy choice they most prefer. If there is more than one such candidate, voters...
choose from among those candidates using an equal-probability rule. If there is only one candidate in the race, that candidate wins by default. To capture the idea that businessmen have preferences that may diverge from those of the general population, assume that voters have identical preferences with most preferred policy \( x \neq \bar{x} \). Voting is by plurality rule, though given the assumption of voter homogeneity, a variety of other voting rules produce the same outcome.

A concrete example of this policy environment is as follows: \( x \) is a vector of subsidies or tax breaks to each businessman that must be financed through cuts in public-goods provision. The assumption of a conflict of interest among businessmen implies that the elimination of the subsidy or tax break to any one businessman does not hurt any other businessman. The assumption of a conflict of interest between businessmen and voters would be satisfied if voters preferred that businessmen not receive subsidies or tax breaks.

The assumption of voter homogeneity departs from many models of electoral competition, though it is typical of models of political agency, where the question is whether voters can prevent politicians from extracting rents and otherwise behaving opportunistically once in office.\(^9\) In our setting, equilibrium when campaign promises are binding can be ensured either by assuming a low-dimensional policy space and arbitrarily restricting entry, or by assuming sufficient homogeneity of voter preferences. (At the expense of additional notation, one could assume some heterogeneity of voter preferences, as when employees of businessmen have different preferences over policy than nonemployees. An equilibrium would then exist and the results hold so long as there is sufficient homogeneity to ensure a unique policy in the core; see, e.g., Austen-Smith and Banks 1999.) We adopt the latter assumption, given the importance to the argument of policy conflict among many businessmen—and so a high-dimensional policy space—and entry by an arbitrary number of candidates. In essence, we choose to focus on the policy conflict that is most important to our setting: competition among businessmen for rents, where any particular businessman may have interests that run counter to those of the general public.

Following candidate entry and prior to voting, each candidate—businessman or professional politician—announces a policy to be implemented after the election. The focus is on the relationship between institutions that make reneging on campaign promises costly, on the one hand, and the political participation of businessmen and public policy, on the other. To explore this relationship, we consider two versions of the model. The first version assumes that campaign promises are binding, so that the election winner implements the policy announced during the campaign; this corresponds to strong democratic institutions. The second version assumes that campaign promises are not binding, which corresponds to weak democratic institutions.\(^10\) In this case, the election winner may costlessly ignore promises made during the election campaign and choose any policy \( x \in X \). Businessmen may attempt to influence this policy choice through the promise of contributions. As is standard in the political-economy literature, the lobbying process is modeled as a “menu auction” as in Bernheim and Whinston (1986) and Grossman and Helpman (1994). In particular, in the lobbying game each businessman (with the exception of the winning candidate in the event that a businessman is the election winner) provides a contribution schedule \( C_i(x) \), which offers a particular contribution for every policy \( x \in X \). Following receipt of the schedules, the election winner chooses \( x \). Assume that the preferences of any businessman \( i \) over outcomes in the lobbying game can be represented as the sum of \( u_i(x) \) and of monetary contributions from lobbying; these contributions are negative for a businessman who does not hold office and provides nonzero contributions in equilibrium, and positive for a businessman who holds office and receives nonzero contributions in equilibrium. Politicians are indifferent over all policies and, therefore, if elected, choose policy to maximize lobbying contributions from businessmen.\(^11\)

It is important to note that the model rules out binding contracts between electoral candidates and businessmen over the policy implemented in the case of the candidate’s victory. If campaign promises are binding, then any promise to a businessman to pursue some policy after

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\(^9\) The seminal references are Barro (1973) and Ferejohn (1986).

\(^10\) Identical results are obtained from a “convexified” version of the model that is more general but somewhat less transparent than that presented here. In this alternative version of the model, after the election but prior to the choice of policy, a random variable \( \sigma \in \{\sigma^y, \sigma^N\} \) is realized, such that if \( \sigma = \sigma^y \), then the policy promised by the election winner is implemented, whereas if \( \sigma = \sigma^N \) the campaign promise may be costlessly ignored.

\(^11\) An important question is whether politicians and businessmen can make credible promises in the lobbying game even when campaign promises are not binding. The model assumes that such commitment is possible, treating postelection lobbying as a spot-market transaction (in which political favors are provided in return for monetary compensation) with few dynamic considerations, one roughly akin to the exchange of money for goods in a retail environment. Campaign promises, in contrast, typically are made months before policy is implemented, so that when democratic institutions are weak there is a strong incentive for elected officials to renege on their promises. Besley and Coate (2001) adopt the identical framework, modeling postelection decision making when campaign promises are not binding as a menu auction à la Grossman and Helpman.
the election is not credible if some other policy must be promised to voters to be elected. If campaign promises are not binding, then once in power the winner may renege on promises to businessmen as easily as he can on those to voters.\textsuperscript{12}

All elements of the game are common knowledge. Summarizing, the timing of events is as follows:

1. Entry: Simultaneously and independently, the businessmen and politicians decide whether to enter the race.
2. Platform choice: Each candidate promises to implement some policy $\mathbf{x} \in \mathbf{X}$ if elected.
3. Election: Voters cast their ballot for the candidate whose expected policy choice they most prefer.
4. Policy choice: In the model with binding campaign promises, the winning candidate implements the policy promised during the campaign. In the model with no commitment to campaign promises, policy is chosen through a lobbying process modeled as a menu auction.

**Equilibrium**

We solve for subgame-perfect equilibria of each of the two versions of the model: (1) the model with binding campaign promises and (2) the model without binding campaign promises. As discussed below, we restrict attention to equilibria in which contribution schedules are “compensating.”

**Equilibrium in Model with Binding Campaign Promises.** When campaign promises are binding, the equilibrium outcome is easy to derive. Clearly, if there are two or more candidates, then any candidate promises to implement voters’ most preferred policy, $\hat{\mathbf{x}}$. If every candidate has committed to $\hat{\mathbf{x}}$, then any deviation to some other platform results in that candidate’s losing with certainty. In contrast, if some candidate has not committed to $\hat{\mathbf{x}}$, then at least one candidate could increase his probability of winning by deviating to $\hat{\mathbf{x}}$. This implies that every candidate who has entered wins with equal probability, and enough candidates enter to exhaust the exogenous rent from holding office $v$. The assumption that $\frac{v}{\delta} > \delta$ implies that an equilibrium always exists, and that in any equilibrium there are at least two candidates, as otherwise some politician would enter to have a chance to win $v$. In particular, given that at least one politician enters, the number of candidates $N_b$ in equilibrium (where the subscript $b$ refers to binding campaign promises) satisfies

$$\frac{v}{\delta} - 1 \leq N_b \leq \frac{v}{\delta}.$$

The inequality on the left says that no additional politician wants to enter the race, given that $N_b$ candidates enter. Note that if no politician wants to enter, then because $\kappa > \delta$ no businessman wants to enter either. The inequality on the right says that some politician finds it worthwhile to enter the race if $N_b - 1$ other candidates also enter. (Below we consider the question of whether a businessman candidate would want to enter the race, given that there are $N_b - 1$ other candidates.) Intuitively, the larger the exogenous payoff from holding office and the smaller the cost of entry, the higher the number of candidates in equilibrium.

The focus is on the conditions under which a businessman would choose to enter the race as a candidate. The following proposition establishes that the only circumstance in which a businessman could be in the race when campaign promises are binding is when he is one of two candidates. As the same policy $\hat{\mathbf{x}}$ is adopted so long as there is some political competition, a businessman in a race with at least three candidates could save the cost of entry and receive the same policy by instead not entering.

**Proposition 1.** When campaign promises are binding, there are at least two candidates in equilibrium; there is no equilibrium with three or more candidates, at least one of which is a businessman; and in any equilibrium all candidates commit to $\hat{\mathbf{x}}$, the policy most preferred by voters.

**Proof.** It has already been established that there is no one-candidate equilibrium and that the equilibrium policy is $\hat{\mathbf{x}}$ when there are two or more candidates. To see that there is no equilibrium with $N \geq 3$ candidates, one of which is some businessman $i$, assume otherwise. Then the payoff for businessman $i$ in equilibrium is $u_i(\hat{\mathbf{x}}) + \frac{v}{N} - \kappa$. In contrast, if businessman $i$ deviates by not entering, his payoff is $u_i(\hat{\mathbf{x}})$. As $\kappa > \frac{v}{\delta}$ by assumption, the payoff from deviation is greater. Thus, there is no equilibrium with $N \geq 3$ candidates, at least one of which is a businessman. \textit{QED}

A two-candidate equilibrium with a businessman candidate may exist, even though the exogenous rent from holding office is not high enough to justify the

\textsuperscript{12}The following example is illustrative: In early 2004, a businesswoman from the Russian region of Ryazan gave $1.7$ million to gubernatorial candidate Georgii Shpack in return for a written promise to be named vice governor if the candidate was elected. Shpack won the election, but reneged on this campaign promise by choosing a different vice governor. Lacking other means of enforcing her agreement with the governor, the businesswoman filed suit for breach of contract. Not surprisingly, the suit was ultimately withdrawn. See Moscow Times, February 16, 2005; Kommersant, March 5, 2005.
opportunity cost of running for a businessman. To see this, observe that the payoff for businessman \(i\) in such an equilibrium is \(u_i(x) + \frac{x}{2} - \kappa\). In contrast, businessman \(i\)'s payoff from deviating by not entering is equal to his utility from the policy most preferred by the other candidate: if businessman \(i\) does not enter, the other candidate runs alone and so is unconstrained in his choice of policy. Let \(x'\) refer to this policy. Then the payoff for businessman \(i\) in equilibrium is greater than the payoff from deviating so long as \(x \geq \frac{u_i(x) - u_i(x')} + \frac{x}{2}\), which is the case so long as businessman \(i\)'s preference for \(x\) over \(x'\) is sufficiently great.

Any two-candidate equilibrium with a businessman candidate, however, is inefficient. The only reason the businessman stays in the race is his fear of the policy that would be implemented if he were to leave the other candidate unopposed. But any other candidate could play the same role, introducing political competition and forcing policy to \(x\). Further, a politician could play this role more cheaply than the businessman could, because by assumption the opportunity cost of running is less for politicians. Thus, the businessman could agree with a politician for the politician to enter in his place. As the businessman saves \(\kappa - \frac{x}{2}\) by having somebody else run in his place, in principle he would be willing to pay the politician to do so. However, even in the absence of such a transfer the deal will stick: the politician will want to enter, given that the businessman does not, as the expected payoff from entry \(\frac{x}{2}\) is greater than the opportunity cost of running \(\delta\).

**Proposition 2.** When campaign promises are binding, any (two-candidate) equilibrium with a businessman candidate is Pareto dominated by a two-candidate equilibrium with no businessman candidates.

**Proof.** See above.

Propositions 1 and 2 together suggest that public policy should reflect voters’ preferences and that businessman candidates should be unlikely when institutions that hold elected officials accountable to voters are strong.\(^{13}\)

**Equilibrium in Model without Binding Campaign Promises.** When campaign promises are not binding, the election winner is unconstrained by his campaign promise. Policy is thus chosen after the election through a menu auction, where each businessman \(i\) (but the election winner, if a businessman) provides the election winner with a contribution schedule \(C_i(x)\), which offers a particular contribution for every policy \(x \in X\). We restrict attention to equilibria in which contribution schedules are compensating, i.e., those for which differences in promised contributions reflect differences in the businessman’s utility from different policies, subject to the constraint that contributions are not negative. Bernheim and Whinston (1986) show that any compensating equilibrium of a menu-auction game (which they refer to as “truthful” equilibria) is jointly efficient. This implies that regardless of who wins the election, the policy implemented is \(x = \arg\max_x \sum_i u_i(x)\), which uses the assumption that politicians (once in office) care only about maximizing lobbying contributions and that the payoff for any businessman is linear in contributions. Intuitively, the fact that contribution schedules are compensating means that the election winner fully internalizes the impact of changes in policy on each businessman’s utility. In particular, this is the case regardless of whether the election winner is a politician (in which case the election winner chooses the policy jointly efficient among all businessmen) or a businessman (in which case the election winner internalizes the effect of changes in policy on his own utility and on the utility of every other businessman). Anticipating the outcome of the lobbying game, voters are therefore indifferent among candidates when campaign promises are not binding. Consequently, if there are \(N\) candidates, each candidate wins with probability \(\frac{1}{N}\).

The sharp prediction that equilibrium policy does not depend on the identity of the election winner follows from the assumption that politicians care about lobbying contributions but not policy. (Alternatively, policy would not depend on who wins if politicians cared about policy but were also able to lobby the election winner, an implication of the Coase Theorem.) In practice, politicians may have direct preferences over policy, so that the policy that is jointly efficient among all businessmen might be different from that which is jointly efficient among all businessmen and a politician. The results would then hold approximately so long as the aggregate policy interest of all businessmen is large relative to the interest of the sole politician who acquires public office, an assumption consistent with the observations of Olson (1965) and Stigler (1971), among others.\(^{14}\)

\(^{13}\)The online appendix shows that the latter result holds when voters’ preferences, and thus the election outcome, may be influenced by campaign spending. In principle, disproportionate access to campaign finance by businessmen may affect the policies promised by candidates. However, when campaign promises are binding, businessmen need not be in the race to exercise this influence. Thus, as in the baseline model, businessmen choose not to run to save the opportunity cost of running.

\(^{14}\)In addition, the results rely on the efficiency of compensating equilibria in menu-auction games. To the extent that bargaining is inefficient, the equilibrium policy may depend on the identity of the election winner, though predictions about the presence of
Although equilibrium policy is the same regardless of who wins, the distribution of rents is not. A politician who wins receives lobbying contributions from all businessmen, whereas a businessman who wins saves on his own lobbying contribution and receives contributions from all other businessmen. The following proposition establishes that there is thus a common endogenous rent from holding office, regardless of the identity of the election winner.

**Proposition 3.** When campaign promises are not binding, equilibrium policy is $\bar{x} \equiv \arg \max_x \sum_i u_i(x)$ (the policy that is jointly efficient among all businessmen) regardless of the election winner, and there is an endogenous rent $R$ from holding office common to all election winners—politicians and businessmen. This rent is given by the following expression:

$$R = \sum_j \sum_{i \neq j} [u_i(\bar{x}_{-j}) - u_i(\bar{x})], \tag{1}$$

where $\bar{x}_{-j} \equiv \arg \max_x \sum_{k \neq j} u_k(x)$.

**Proof.** See the appendix.

How does the endogenous rent $R$ to be earned by the election winner depend on the political-economic environment? Formally, Expression 1 is the sum of contributions paid by each businessman when the election winner is a politician, and it is the sum of contributions paid by all other businessmen when a businessman is the election winner plus the contribution that the election winner would otherwise pay if he were not on the receiving end of the lobbying process. Intuitively, $R$ is bigger when the conflict of interest among businessmen is greater, because then the election winner is able to more effectively play one businessman’s interests off of another’s.

When campaign promises are binding, the circumstances under which businessmen might choose to run for office are sharply circumscribed. In contrast, when campaign promises are not binding, the election winner has monopoly power that may be used to extract rents. Because the only way to extract these rents is to actually hold office, a businessman may be tempted to run. The following proposition gives the precise condition for existence of an equilibrium with a businessman candidate.

**Proposition 4.** There exists an $N$-candidate equilibrium with at least one businessman candidate if and only if $\frac{v + R}{b} - 1 \leq N \leq \frac{v + R}{\kappa}$.

Politicians are in a position to extract rents through control of public policy. When political institutions are weak and policy makers earn large rents, talented individuals might therefore be drawn to politics rather than business. (In contrast, when political institutions are strong, rents are competed away through the process of electoral competition.) This could have a negative impact on growth, as potential innovators are drawn away from the private sector (Murphy, Shleifer, and Vishny 1991). It is important to stress, however, that businessman candidates are also engaged in rent seeking rather than productive business activity.

**Proof.** Recall that policy is the same regardless of the election winner, so that voters are indifferent among candidates. All candidates therefore win the exogenous rent $v$ and endogenous rent $R$ with equal probability. Then no politician (and no businessman because $\kappa > \delta$) who has not entered the race wants to deviate by entering, given that $N$ candidates have entered, if $\frac{v + R}{N+1} - \delta \leq 0$. In addition, no businessman who has entered the race wants to deviate by not entering if $\frac{v + R}{N} - \kappa \geq 0$. These together imply the condition in the proposition. QED

So long as the opportunity cost of running for businessmen is not too large, then businessmen prefer to enter the race if they have a reasonable chance of winning. However, if the field is sufficiently fragmented, then only politicians enter the race, as the opportunity cost of running is lower for them than it is for businessmen. In particular, when the payoff from election $(v + R)$ is sufficiently large, then there is no equilibrium with businessman candidates. Intuitively, as the rents from holding office (identical for businessmen and for politicians, by Proposition 3) increase, politicians enter the race at a faster rate than do businessmen; ultimately, businessmen are crowded out.

**Proposition 5.** When campaign promises are not binding, for any $\delta$ and $\kappa$ there exists no equilibrium with a businessman candidate if the payoff from holding office $(v + R)$ is sufficiently large.

**Proof.** The condition in Proposition 4 does not hold for any $N$ when $\frac{v + R}{\delta} - 1 > \frac{v + R}{\kappa}$, i.e., when $v + R > \frac{\delta \kappa}{\kappa - \delta}$. This is clearly the case for $v + R$ sufficiently large. QED

An implication of Proposition 5 is that the distribution of rents among politicians and firms tends to favor politicians when the returns from policy influence are large. With businessmen crowded out of electoral politics, politicians are in a position to extract rents through control of public policy. When political institutions are weak and policy makers earn large rents, talented individuals might therefore be drawn to politics rather than business. (In contrast, when political institutions are strong, rents are competed away through the process of electoral competition.) This could have a negative impact on growth, as potential innovators are drawn away from the private sector (Murphy, Shleifer, and Vishny 1991). It is important to stress, however, that businessman candidates are also engaged in rent seeking rather than productive business activity.

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15Formally, the participation constraint for businessmen does not bind for $N = 2$, the most favorable situation, if $\kappa \leq \frac{v + R}{2}$. 

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**BUSINESSMAN CANDIDATES**


**Empirical Analysis**

The theoretical model generates empirical predictions with respect to businessman candidacy and the granting of favors to businessmen. Although favors are difficult to observe directly (especially when democratic institutions are weak), businessman candidacy is not. We therefore focus on hypotheses relating the presence of businessman candidates to the quality of democratic institutions and the returns to businessmen from policy influence, where the latter implicitly captures the potential for businessmen and politicians to earn rents from holding office. Propositions 1 and 2 suggest that businessman candidates should be uncommon in the presence of institutions that hold elected officials accountable to voters, regardless of the potential returns to businessmen from policy influence: electoral competition encourages candidates to adopt positions preferred by voters, so that businessmen can simply ignore the race or agree with politicians to run in their place. In contrast, as shown in Propositions 4 and 5, businessmen may run for public office when democratic institutions are weak, though only if rents from holding office are not so large that professional politicians crowd out businessmen. Together, these predictions suggest a relationship between the strength of democratic institutions and businessman candidacy that is conditional on the potential returns from policy influence: negative when those returns are relatively low, zero when they are high.

Do the empirical evidence support these predictions? We address this question by examining the incidence of businessman candidates in Russian gubernatorial elections between 1991 and 2005. Russia provides an ideal empirical setting for two reasons. First, Russia’s democratic institutions are underdeveloped and so generally provide limited incentives for elected politicians not to break campaign promises. In many regions, the media are too biased and government decision making insufficiently transparent for citizens to monitor the actions of elected officials (e.g., Fish 2005). Political parties are also weak, increasing the scope for opportunististic behavior by individual politicians (e.g., Colton and McFaul 2003; Hale 2005; Rose and Munro 2002; Smyth 2006; Tucker 2006). This is especially true of regional elections, where few candidates are nominated by political parties, and those parties that are active are often local organizations with little ideological orientation. As a consequence of this institutional weakness, “rather than invest in a candidate’s election,” businessmen often “buy the cooperation of [politicians] on particular votes or issues” (Treisman 1998, 14). Consistent with the model presented above, one might therefore expect the phenomenon of businessman candidacy to be pervasive, at least where rents are not so large that professional politicians crowd businessmen out of electoral politics.

Second, at the regional level there is substantial variation in the quality of these institutions, in part the result of political and economic decentralization in the early 1990s (e.g., Shleifer and Treisman 2000), as well as in economic structure and thus the potential returns from policy influence. We exploit this variation to test the model’s predictions by comparing the likelihood of businessman candidacy across different regional political-economic environments. At the same time, we hold constant any effect of variables not stressed by the theory but potentially important in explaining businessman candidacy, such as legal restrictions on business activities by public officials (which may themselves be endogenous to businessman candidacy, and which in practice are unenforced in Russia) and electoral rules.


18Indeed, while the focus of this article is on gubernatorial elections, there is evidence that businessmen are also running in large numbers in other elections in Russia. For example, the Russian newspaper Kommersant reports that 77 members (out of 450) of the Duma (the lower house of parliament) elected in 1999, and 66 members elected in 2003, were “direct representatives” of business ("Biznes i Vlast: Zakonodatelnyi Sovet Direktorov [Business and Power: The Legislature as Boardroom],” Kommersant, December 26, 2003). Data on business representation in the 2003 Duma gathered by the Moscow Times suggest that the latter number may be a substantial underestimate ("Duma Has a Big Business Lobby," Moscow Times, January 20, 2004; Francesca Mereu, Moscow Times, private communication).

19The focus on gubernatorial elections may also be advantageous because for much of the time period of the study, Russia’s governors—in contrast to members of the Duma—enjoyed no judicial immunity. Consequently, any concern that businessmen might run for office to escape criminal prosecution would not apply to those elections. Russia’s governors did enjoy judicial immunity from roughly 1995 to 2001 by virtue of their position as members of the Federation Council, Russia’s upper house of parliament. Nonetheless, controlling for other characteristics, the average probability of a businessman candidate in a gubernatorial election was actually greater after the elimination of this privilege than before.
Data and Measures

Russian gubernatorial elections were held from June 1991 through February 2005. Since then, regional executives have been chosen by a system of presidential nomination. In all, there were 247 elections in 88 regions (out of 89 total) during the period of direct gubernatorial election.20 Each of the 88 regions had at least two and at most five gubernatorial elections, with an average of 2.8 elections per region.

We gathered information on the business affiliation of candidates in each of these elections, drawing on two sources: (1) official candidate biographies published by the Russian Central Election Commission, and (2) the Labyrinth database, available at www.labyrinth.ru, which provides biographies of Russian businessmen and politicians. A candidate in a gubernatorial race is classified as a businessman candidate if (1) at the time of the electoral race the candidate was a major owner and/or top manager of a business, and (2) this business was not acquired by the candidate while holding public office. The latter situation describes not a businessman candidate but a professional politician who used public office for private gain. The inclusion of both owners and managers captures the evolution over time of “businessmen” from directors of state-owned enterprises (who by the beginning of the 1990s had acquired substantial de facto property rights) to owners and managers of private enterprises. As Table 1 shows, according to this definition there was at least one businessman candidate in 151 of the 247 elections. Of these, in 104 elections a businessman candidate received at least 5% of the vote and in 66 elections at least 10% of the vote. In all there were 17 winners who were businessmen candidates.

We define the following three dummy variables: (1) Businessman candidate, which takes a value of one if there was any businessman candidate in the race, and zero otherwise; (2) Businessman candidate with more than 5% of the vote, which takes a value of one if there was any businessman candidate in the race who received at least 5% of the vote, and zero otherwise; and (3) Businessman candidate with more than 10% of the vote, which is defined analogously. (Recall that the model’s key predictions relate to the presence rather than number of businessman candidates.) The first variable indicates the presence of any businessman candidate in the race, whereas the second and the third indicate the presence of a “serious” businessman candidate, i.e., a candidate with a realistic expectation of winning. The distinction is important, as in Russia businessmen sometimes (mis)use the free media access guaranteed by law to electoral candidates to advertise their products (Kryshtanovskaya 2005). We primarily examine “serious” businessman candidates, as we wish to underemphasize factors that may be idiosyncratic to Russian politics in favor of the arguably more general electoral incentives stressed by our theory.

To test the relationship between institutional environment and the likelihood of (serious) businessman candidates, we consider three characteristics of Russian regions that may reflect constraints on the ability of public officials to renege on campaign promises: media freedom, government transparency, and strength of national political parties. Media freedom and government transparency allow voters to better monitor public officials and so to punish officeholders who have reneged on campaign promises. Strong political parties can more easily enforce party discipline and therefore prevent opportunistic behavior by their members. The model therefore predicts that businessman candidates should be (weakly) less likely in regions with high media freedom, high government transparency, and strong parties. Data sources and summary statistics for these and other independent variables are given in Table 1.

Of these three institutional variables, two are expert ratings available only as cross-sectional data. The index of media freedom is collected and published by the non-governmental organization Public Expertise and is based on regional media law, independent representation on regional media licensing commissions, and the actual regional circulation and coverage of private media. The index of government transparency is provided by Media Soyuz, an independent association of journalists, and measures the extent to which policy decisions made by the executive branch of the regional government (i.e., the governor’s office) are accessible to the general public through the media and publication on official web sites. Both indexes were published in 2000 and reflect conditions in Russian regions during the 1990s. Potential endogeneity concerns related to these variables are discussed later in the article. Missing data for these measures and for regional income per capita (discussed below) reduce the number of observations somewhat from the 247 elections in the data set.21

20One region—the republic of Dagestan—never had direct gubernatorial elections; executives were instead appointed by the regional parliament.

21The media freedom index was not constructed for eight regions, and the government transparency index for two regions. Russia’s statistical agency did not publish income data separately for autonomous okrugs for some years included in the sample. Using the Amelia II program, which implements the procedure described in King et al. (2001), we have verified that the results are robust to multiple imputation of missing values.
### Table 1 Variable Sources and Summary Statistics

**Panel A: Businessman Candidates (Collected by the Authors for Each Regional Election)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Businessman candidate dummy variable</td>
<td>= 1 for 151 out of 247 elections (142 out of 231 elections*)</td>
</tr>
<tr>
<td>Businessman candidate with at least 5% of vote dummy variable</td>
<td>= 1 for 104 out of 247 elections (102 out of 231 elections*)</td>
</tr>
<tr>
<td>Businessman candidate with at least 10% of vote dummy variable</td>
<td>= 1 for 66 out of 247 elections (65 out of 231 elections*)</td>
</tr>
</tbody>
</table>

*Subsample for which regional data are available

**Panel B: Sources and Definitions for Independent Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source and/or Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength of parties</td>
<td>Proportion of single-member district candidates from region in parliamentary elections nominated by major parties, constructed by the authors using data from the Russian Central Elections Commission</td>
</tr>
<tr>
<td>Percentage of employment in extraction industries</td>
<td>Yearbook Russia's Regions, Rosstat</td>
</tr>
<tr>
<td>Republic status</td>
<td>Dummy variable = 1 if region has republic status</td>
</tr>
<tr>
<td>Autonomous okrug (AO) status</td>
<td>Dummy variable = 1 if region has autonomous okrug status</td>
</tr>
<tr>
<td>Population</td>
<td>Yearbook Russia's Regions, Rosstat</td>
</tr>
<tr>
<td>Income per capita</td>
<td>Yearbook Russia's Regions, Rosstat</td>
</tr>
<tr>
<td>Incumbent participation</td>
<td>Russian Central Elections Commission</td>
</tr>
<tr>
<td>Number of candidates</td>
<td>Russian Central Elections Commission</td>
</tr>
</tbody>
</table>

**Panel C: Summary Statistics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media freedom index</td>
<td>219</td>
<td>37.274</td>
<td>13.864</td>
<td>0</td>
<td>75</td>
</tr>
<tr>
<td>Government transparency index</td>
<td>229</td>
<td>3.667</td>
<td>1.984</td>
<td>0.03</td>
<td>8.75</td>
</tr>
<tr>
<td>Strength of parties</td>
<td>231</td>
<td>0.236</td>
<td>0.128</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Log(percentage of employment in extraction industries + 1)</td>
<td>231</td>
<td>2.173</td>
<td>1.185</td>
<td>0</td>
<td>4.277</td>
</tr>
<tr>
<td>Dummy for republic status</td>
<td>231</td>
<td>0.229</td>
<td>0.421</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Dummy for AO status</td>
<td>231</td>
<td>0.078</td>
<td>0.269</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Log population</td>
<td>231</td>
<td>7.045</td>
<td>1.106</td>
<td>2.890</td>
<td>9.248</td>
</tr>
<tr>
<td>Log income per capita</td>
<td>231</td>
<td>−1.263</td>
<td>0.540</td>
<td>−2.580</td>
<td>0.141</td>
</tr>
<tr>
<td>Dummy for incumbent participation</td>
<td>231</td>
<td>0.892</td>
<td>0.311</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Number of candidates</td>
<td>231</td>
<td>5.935</td>
<td>2.943</td>
<td>1</td>
<td>16</td>
</tr>
</tbody>
</table>

We constructed the third variable, a proxy for the strength of national political parties, for each region and each year using information on the party affiliation of candidates for the Duma, the lower chamber of the Russian parliament. From 1991 to 2005 there were four parliamentary elections in Russia (in 1993, 1995, 1999, and 2003). In each of these elections, one-half of the members of the Duma were chosen by majoritarian voting with
typically multiple single-member districts (SMDs) in each region; the other half of the seats were filled according to proportional representation with party-list voting in a single national district. According to the electoral rules for these elections, SMD candidates could be nominated either by a political party or by an independent group of voters of a certain minimum size.

We define strength of parties as the proportion of SMD candidates across all districts in a region who were nominated by national political parties in the previous election. As there were four parliamentary elections in Russia between 1991 and 2005, this measure varies over time as well as across regions. Over these four elections, 23% of all SMD candidates were nominated by national political parties, where a party is designated as national if its national vote in that Duma election exceeded the legal threshold to receive seats through proportional representation.

Testing for any crowding out of businessman candidates by professional politicians requires a measure of the attractiveness of holding gubernatorial office. Our primary focus is the endogenous rent $R$ from holding office: the unofficial “compensation” from lobbying that is received (or saved) by the election winner, which captures the returns to businessmen from policy influence. We assume that the opportunity to extract such rents is higher in regions with abundant natural resources: taxes on windfall profits are nondistortionary and comparatively easy to collect, and control of these revenue streams provides rents to elected officials whom voters fail to hold accountable. Under this assumption, the prediction of the model is that businessman candidates should be less likely in regions that are rich in natural resources, but only in the absence of institutions that make reneging on campaign promises costly. This prediction is tested by interacting the institutional variables discussed above with log(percentage of employment in extraction industries + 1). The log transformation is used to more closely approximate a normal distribution. The following discussion refers more simply to log extraction share or log percentage of employment in extraction.

**Empirical Methodology**

We first examine the effect on businessman candidacy of the strength of democratic institutions at the average level of resource abundance in the region, our measure of returns from policy influence. To do so, we estimate a probit model on the pooled sample of all gubernatorial elections, where the probability of a businessman candidate is

$$
\Pr(b_i = 1) = \alpha_b + \beta m_i + \gamma p_{r,t} + \delta d_{r,t} + \eta_i X_i + \epsilon_i. \tag{2}
$$

The subscript $i$ indexes each gubernatorial election; the subscripts $r$ and $t$ index region and year, respectively, of gubernatorial election $i$; $b_i$ denotes one of the three dummy variables for presence of a businessman candidate in the race in election $i$; $m_i$ is either media freedom or government transparency of region $r_i$; $p_{r,t}$ is the strength of parties; $d_{r,t}$ is log extraction share; and $X_i$ is a vector of control variables described below.

The prediction of the theoretical model is that $\beta \leq 0$ and $\gamma \leq 0$. These inequalities are not strict because we predict an effect of institutions on businessman candidacy that is conditional on the resource abundance of the region—a strictly negative relationship between institutional strength and businessman candidacy when resource abundance is relatively low, and no relationship when resource abundance is high. The specification of $m_i$ as either media freedom or government transparency is due to the high correlation between the two variables (a pairwise correlation of 0.350), which renders estimates of their effects imprecise if entered jointly. In contrast, both variables are nearly uncorrelated with our measure of strength of parties (a pairwise correlation of $r = 0.012$ and $r = -0.013$, respectively). Standard errors are corrected to allow for clustering of error terms ($\epsilon_i$) within regions.

To test the hypothesis that businessmen are crowded out by professional politicians when institutions that make reneging on campaign promises costly are weak and returns from policy influence are high, we study the differential effect of the log percentage of employment in extraction in regions with strong and weak political institutions by estimating two probit regression models:

$\Pr(b_i = 1) = \alpha_b + \beta m_i + \gamma p_{r,t} + \delta d_{r,t} + \xi m_r d_{r,t} + \eta_i X_i + \epsilon_i; \tag{3}$

$\Pr(b_i = 1) = \alpha_b + \gamma p_{r,t} + \delta d_{r,t} + \xi p_{r,t} d_{r,t} + \eta_i X_i + \epsilon_i. \tag{4}$

The prediction is that $\xi > 0$ in both of these equations. As with the previous model, standard errors are corrected to allow for clustering of error terms within regions.

All empirical models in this article control for regional and election characteristics that may be correlated with both the likelihood of businessman candidacy and the measures of institutions and rents from holding office. Dummy variables are included for two regional designations: republic status (21 regions) and autonomous okrug status (11 regions). Republic status implies the presence of a titular ethnic group and typically greater autonomy from the federal center, whereas autonomous okrug status implies that the region is geographically and—to some
extent—administratively a part of another region. In both cases the institutional environment may differ from that in other regions in a way that influences businessman candidacy. Additional controls include log population and log regional income per capita, which may be correlated with formal compensation and “ego” rents from holding office ($v$ in the theoretical model), as well as the opportunity cost of running for office ($\delta$ and $\kappa$ in the theoretical model). All regression equations also include a dummy variable equal to one if the incumbent governor ran for reelection (“incumbent participation”), as the advantages of incumbency in an electoral contest may influence the incentives for a businessman to participate in the race. The number of candidates in the election is also included as a covariate to ensure that the results are not driven by variation in the number of “draws” from the pool of potential candidates, as the dependent variable is the probability that at least one candidate is a businessman candidate (with a certain percentage of the vote). As discussed below, all results are robust to exclusion of incumbent participation and the number of candidates, which are determined in equilibrium together with the presence of businessman candidates. Finally, year fixed effects are included to prevent spurious correlation related to variation over time in both the average number of businessman candidates (which might result, for example, from changes in the relative attractiveness of various career options or the failure of our coding rule to fully capture the evolution of what constitutes a “businessman” in the post-Soviet context) and the average level of some of the independent variables.

### Empirical Results

The first empirical result is that variation in the regional institutional environment at average levels of resource abundance has explanatory power only for the presence of “serious” businessman candidates, i.e., businessman candidates with a nontrivial chance of winning. The estimated effect of media freedom, government transparency, and party strength on the probability of any businessman candidacy in regions with strong and weak democratic institutions, as the dependent variable is the probability of a businessman candidate with at least 10% of the vote and strength of parties is entered together with media freedom.

Table 2 presents results from these models, reporting estimated marginal effects on the probability of a businessman candidate with at least 5% and 10% of the vote. The first four columns report results from the probit model that estimates the effects of the main explanatory variables at average values of the covariates (equation 2 above). Consistent with the prediction of a weakly negative effect of institutional strength on businessman candidacy, there is a negative relationship between regional institutions that hold elected officials accountable to voters and the probability of a serious businessman candidate in the gubernatorial race. The estimated effects of media freedom and government transparency are both negative and in all specifications are statistically significant. The estimated effect of strength of parties is also negative, but is statistically significantly different from zero only when the dependent variable is the probability of a businessman candidate with at least 10% of the vote and strength of parties is entered together with media freedom.

The first four columns of Table 2 also show that the average effect of log extraction share (the measure of endogenous rents from holding political office) on the probability of businessman candidates is consistently negative, though insignificant in those models with a 5% “seriousness threshold” for businessman candidates. The consistently negative average effect of log extraction share is suggestive of the overall weakness of democratic institutions in Russia’s regions, as the model predicts crowding-out effects only in the absence of institutions that make reneging on campaign promises costly. To examine the impact of regional variation in these institutions, we estimate the differential effect of resource abundance on businessman candidacy in regions with strong and weak democratic institutions by interacting log extraction share with the institutional measures (equations 3 and 4 above). Estimation results from these models are reported in columns 5–10 of Table 2. Consistent with the model’s prediction, the estimated effect of the interaction between media freedom and government transparency on the one hand, and log percentage of employment in extraction on the other, is always positive and is statistically significant in all but one specification (columns 5–8). Only in regions with relatively low media freedom and government transparency (where businessman candidates generally are more frequent) does resource abundance lead to a decrease in the probability of serious businessman candidates. The estimated effect of the interaction of log extraction share and party strength also has the predicted
### TABLE 2  Determinants of Businessman Candidacy

Dependent Variable: Probability of Businessman Candidate with at Least 5% or 10% of the Vote

<table>
<thead>
<tr>
<th></th>
<th>BC with 5%</th>
<th>BC with 10%</th>
<th>BC with 5%</th>
<th>BC with 10%</th>
<th>BC with 5%</th>
<th>BC with 10%</th>
<th>BC with 5%</th>
<th>BC with 10%</th>
<th>BC with 5%</th>
<th>BC with 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media freedom</td>
<td>-0.010</td>
<td>-0.011</td>
<td>-0.018</td>
<td>-0.019</td>
<td>[0.004]***</td>
<td>[0.003]***</td>
<td>[0.007]***</td>
<td>[0.006]***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government transparency</td>
<td>-0.040</td>
<td>-0.042</td>
<td>-0.123</td>
<td>-0.142</td>
<td>[0.022]*</td>
<td>[0.019]**</td>
<td>[0.047]***</td>
<td>[0.036]***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strength of parties</td>
<td>-0.206</td>
<td>-0.538</td>
<td>-0.130</td>
<td>-0.429</td>
<td>[0.340]</td>
<td>[0.272]**</td>
<td>[0.331]</td>
<td>[0.272]</td>
<td>[0.341]</td>
<td>[0.278]**</td>
</tr>
<tr>
<td>Log extraction share</td>
<td>-0.007</td>
<td>-0.052</td>
<td>-0.017</td>
<td>-0.054</td>
<td>[0.032]**</td>
<td>[0.026]**</td>
<td>[0.028]*</td>
<td>[0.082]***</td>
<td>[0.071]**</td>
<td>[0.081]**</td>
</tr>
<tr>
<td>X-term: Media freedom × log extraction share</td>
<td>0.0038</td>
<td>0.0040</td>
<td></td>
<td></td>
<td>[0.0023]***</td>
<td>[0.0020]**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-term: Government transparency × log extraction share</td>
<td>0.043</td>
<td>0.052</td>
<td>0.229</td>
<td>0.226</td>
<td>[0.280]</td>
<td>[0.212]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-term: Strength of parties × log extraction share</td>
<td>0.229</td>
<td>0.226</td>
<td></td>
<td></td>
<td>[0.280]</td>
<td>[0.212]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic</td>
<td>-0.145</td>
<td>-0.098</td>
<td>-0.050</td>
<td>0.013</td>
<td>[0.110]</td>
<td>[0.084]</td>
<td>[0.106]</td>
<td>[0.109]</td>
<td>[0.111]</td>
<td>[0.084]</td>
</tr>
<tr>
<td>Autonomous okrug</td>
<td>0.003</td>
<td>0.365</td>
<td>-0.013</td>
<td>0.430</td>
<td>[0.242]</td>
<td>[0.275]</td>
<td>[0.253]</td>
<td>[0.247]*</td>
<td>[0.232]</td>
<td>[0.224]**</td>
</tr>
<tr>
<td>Log population</td>
<td>-0.028</td>
<td>0.046</td>
<td>-0.043</td>
<td>0.017</td>
<td>[0.049]</td>
<td>[0.048]</td>
<td>[0.051]</td>
<td>[0.049]</td>
<td>[0.048]</td>
<td>[0.048]</td>
</tr>
<tr>
<td>Log income per capita</td>
<td>-0.201</td>
<td>-0.153</td>
<td>-0.110</td>
<td>-0.066</td>
<td>[0.082]**</td>
<td>[0.076]**</td>
<td>[0.080]</td>
<td>[0.074]</td>
<td>[0.082]**</td>
<td>[0.076]*</td>
</tr>
<tr>
<td>Incumbent participation</td>
<td>-0.069</td>
<td>-0.028</td>
<td>-0.038</td>
<td>-0.006</td>
<td>[0.130]</td>
<td>[0.107]</td>
<td>[0.123]</td>
<td>[0.105]</td>
<td>[0.135]</td>
<td>[0.117]</td>
</tr>
<tr>
<td>Number of candidates</td>
<td>0.041</td>
<td>0.051</td>
<td>0.036</td>
<td>0.046</td>
<td>[0.014]***</td>
<td>[0.012]**</td>
<td>[0.014]**</td>
<td>[0.011]**</td>
<td>[0.014]**</td>
<td>[0.012]**</td>
</tr>
</tbody>
</table>

**Notes:** Probit model. Marginal effects reported. Standard errors corrected for clustering at regional level in brackets. Significance levels: *** = .01, ** = .05, * = .10. "Log extraction share" is log(percentage of employment in extraction industries + 1).
positive sign but is imprecisely estimated (columns 9 and 10).22

To illustrate the size of these crowding-out effects, one may compare the effect of resource extraction on the probability of businessman candidacy in regions with strong and weak institutions. Both Koryaksky Autonomous Okrug and North Ossetia, for example, score low on our measure of government transparency (values of 0.3 and 0.4, respectively), but the level of resource extraction is substantially higher in the latter region (log extraction share of 2.6, versus 0.6 in Koryaksky A.O.) Businessman candidates are therefore predicted to be much less common in North Ossetia: a 30 percentage point difference in the predicted probability of a businessman candidate with 10% of the vote, and a 17 percentage point difference in the predicted probability of a businessman candidate with 5% of the vote. Indeed, only one of three elections in North Ossetia featured a businessman candidate with more than 5% of the vote, and none with more than 10%, whereas in Koryaksky A.O. a businessman candidate received at least 5% of the vote in all three elections and more than 10% in two of them.

In contrast, both the city of St. Petersburg (which has regional status) and Tatarstan scored relatively high on our measures of government transparency (values of 7.9 and 7.3, respectively), suggesting that businessman candidates should be unlikely in both regions, despite the lesser prevalence of natural resources in St. Petersburg. The predicted probability of a businessman candidate with either 5% or 10% of the vote is close to zero in both St. Petersburg and Tatarstan, and in practice neither region saw a serious businessman candidate in any election.

Overall, the evidence is consistent with the two main predictions of the model. First, regions with freer media and more transparent government—and hence stronger commitment to campaign promises—witness significantly fewer businessman candidates, with some evidence of similar effects for party strength. Second, businessman candidates are crowded out by professional politicians when the endogenous rents from holding office (as measured by the resource intensity of the local economy) are high, but only when institutions that hold elected officials accountable to voters are weak.

Robustness

We performed a number of checks to ensure that the results are robust. First, we confirmed that the findings are not driven by any outlier regions or elections, searching for influential observations and finding none. Second, we verified that exclusion of any covariate or group of covariates did not yield results substantively different from those reported above. The particular set of covariates affects neither the qualitative nor the quantitative results. Third, we checked that the results are robust to model selection. In addition to the probit model reported in the article, we estimated linear probability and logit models and allowed for regional random effects. The qualitative results were unaffected.

A crucial assumption necessary for the validity of the empirical approach in this article is the exogeneity of the explanatory variables. There are potentially two problems with this assumption. First, there could be reverse causality between the dependent variables and some of the regressors. In particular, one might argue that media freedom and government transparency could be affected by the identity of the officeholder, which in turn may be correlated with businessman candidacy. Yet as the discussion of the lobbying process makes clear, any officeholder should prefer less to more media freedom and government transparency. For both businessmen and professional politicians, the opportunity to benefit from control of the policy process once in office is greater in the absence of institutions that make reneging on campaign promises costly. Nonetheless, we repeated the empirical exercise on the subsample of 119 elections that took place in 2000 and later, which is the time period after the measures of media freedom and government transparency were constructed. The results are robust: the signs and magnitude of estimated effects are very close to those in the full sample. Some effects of interest do lose significance, but this may be attributed to a decrease in the number of observations by approximately one-half from the baseline regressions. Similarly, one could argue that both the number of candidates and incumbent participation could be affected by participation of businessmen in the election. Intuitively, the participation decision of any politician or businessman depends in equilibrium on who else enters. There are no good instruments for these regressors, but as discussed above, the results are robust to the exclusion of these variables from the list of covariates.

Second, endogeneity could arise from unobserved regional variation. This is a particular concern because the empirical results are derived from cross-sectional analysis and Russia’s regions are very diverse. It is impossible to control for this variation with fixed effects, as two of the three institutional measures (media freedom and government transparency) are available only as a cross section and the measure of resource abundance—while available as a panel—varies little over time. To partially address
this problem, all models control for the regional characteristics discussed above: republic and autonomous okrug status, population, and income per capita. We also tried adding a number of other regional characteristics as covariates, including population density, urban population share, industrial concentration, average temperature, latitude, longitude, and distance from Moscow. The results were unaffected. Last, and perhaps more importantly, we included a control for the political preferences of the electorate. One might argue that businessman candidates would be less likely to win—and thus less likely to run—in regions with communist electorates. At the same time, such regions might have weaker democratic institutions. To ensure that the results are not driven by any such spurious correlation, we included the percentage vote received by Genadii Zyuganov—the leader of Russia’s Communist Party—in the 1996 presidential election as an additional control. In fact, the probability of a serious businessman candidate is uncorrelated with this variable after controlling for other regional and election characteristics, and the results were unaffected by its inclusion.

Finally, it is worth stressing that the theory predicts a conditional effect of institutions on businessman candidacy: when the potential returns from policy influence are comparatively low, businessman candidates should be less likely in the presence of strong democratic institutions, whereas when returns from policy influence are high, the quality of institutions should be uncorrelated with businessman candidacy. This relationship, which is observed in the data, would not obviously be produced by unobserved regional heterogeneity. Overall, the results prove robust.

Appendix: Proof of Proposition 3

Equilibrium policy has already been established. To derive the rent from holding office, consider first the case of an election winner who is a politician. In equilibrium the contribution by each businessman $j$ must leave the politician indifferent between (a) implementing $\bar{x}$ and receiving $\sum_i C^P_i(\bar{x})$, where $C^P_i(\cdot)$ is the equilibrium contribution schedule provided by businessman $i$ when a politician is the election winner, and (b) walking away from businessman $j$’s offer and implementing $\bar{x}^P_{-j}$, where $\bar{x}^P_{-j} \equiv \arg \max_{\bar{x}} \sum_{i \neq j} C^P_i(\bar{x})$. Using the assumption that contribution schedules are compensating, this may be rewritten as

$$\bar{x}^P_{-j} \equiv \arg \max_{\bar{x}} \sum_{i \neq j} \max\{u_i(\bar{x}) - (u_i(\bar{x}) - C^P_i(\bar{x))), 0]\.$$
This is equal to $x_{-j} \equiv \arg \max \sum_{i \neq j} u_i(x) \text{ if } u_i(x_{-j}) \geq u_i(x) \text{ for each businessman } i$, which is an assumption of the model. Thus, $x^k_{-j} = x_{-j}$.

One can then express the politician's indifference between $\bar{x}$ and $x_{-j}$ as $\sum_i C_i^k(\bar{x}) = \sum_{i \neq j} C_i^k(x_{-j})$. Using this, one can derive the contribution from businessman $j$ when the election winner is a politician as $C_i^k(\bar{x}) = \sum_{i \neq j} [C_i^k(x_{-j}) - C_i^k(\bar{x})]$. Using the assumption that contribution schedules are compensating, this can be rewritten as $\bar{x} = \sum_{i \neq j} [u_i(x_{-j}) - u_i(\bar{x})]$.

Now consider the case when the election winner is some businessman $k$. In this case, the contribution by any other businessman $j$ must leave businessman $k$ indifferent between (a) implementing $\bar{x}$ and receiving $u_k(\bar{x}) + \sum_{i \neq k} C_i^k(\bar{x})$, where $C_i^k(\bar{x})$ is the equilibrium contribution schedule provided by businessman $i$ when businessman $k$ is the election winner, and (b) walking away from businessman $j$’s offer and implementing $x^k_{-j}$, where

$$x^k_{-j} = \arg \max \sum_{i \neq j,k} u_i(x) + \sum_{i \neq k} C_i^k(x) = \arg \max \sum_{i \neq j,k} u_i(x) + \sum_{i \neq j,k} \max [u_i(x)] - (u_i(\bar{x}) - C_i^k(\bar{x})), 0].$$

Analogous to the argument above, $x^k_{-j} = x_{-j}$ given the assumption that $u_i(x_{-j}) \geq u_i(\bar{x})$ for each businessman $i$. One can then express businessman $k$'s indifference between $\bar{x}$ and $x_{-j}$ as $u_k(\bar{x}) + \sum_{i \neq k} C_i^k(\bar{x}) = u_k(x_{-j}) + \sum_{i \neq j,k} C_i^k(x_{-j})$, which gives the following equilibrium contribution for businessman $j$ given that the election winner is businessman $k$: $C_i^k(\bar{x}) = [u_i(x_{-j}) - u_i(\bar{x})] + \sum_{i \neq j,k} [C_i^k(x_{-j}) - C_i^k(\bar{x})]$. Using the assumption that contribution schedules are compensating, one can rewrite this as follows: $C_i^k(\bar{x}) = [u_i(x_{-j}) - u_i(\bar{x})] + \sum_{i \neq j,k} [u_i(x_{-j}) - u_i(\bar{x})] = \sum_{i \neq j,k} [u_i(x_{-j}) - u_i(\bar{x})]$.

Thus, the equilibrium contribution by any businessman not in office is the same regardless of the identity of the election winner. Using $C_i(\bar{x})$ to refer to this contribution, define the endogenous rent $R_P$ from holding office for any politician as the sum of contributions received from all businessmen: $R_P \equiv \sum_j C_j(\bar{x}) = \sum_j \sum_{i \neq j} [u_i(x_{-j}) - u_i(\bar{x})]$. Similarly, define the endogenous rent $R_k$ from holding office for any businessman $k$ as the difference between the payoff received when in office (a function of both the policy implemented and the lobbying contributions received) and that when not in office (a function of both the policy implemented and lobbying contribution paid):

$$R_k \equiv \left[ u_k(\bar{x}) + \sum_{j \neq k} C_j(\bar{x}) \right] - [u_k(x) - \bar{x}] = \sum_j C_j(\bar{x}) = \sum_j \sum_{i \neq j} [u_i(x_{-j}) - u_i(\bar{x})].$$

Consequently, there is a common endogenous rent $R \equiv R_P = R_k$. QED

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