Dynastic Legislators and Electoral Competition: Theory and Evidence from Japan*

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Abstract

Political positions are no longer hereditary in modern democracies, yet dynastic politicians, whose family members have also held similar political positions in the past, have occupied a sizable portion of political offices in many parts of the world. Despite the persistence of political dynasties across democracies, little is known about political consequences of dynastic politicians. This paper shows that the presence of dynastic politicians undermines the role of electoral competition as a device for choosing desirable representatives. Our model predicts that dynastic candidates enjoy a higher probability of winning and higher vote shares, and discourage non-dynastic politicians from running for office. We provide empirical support for the prediction using data on Japanese politicians.

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1 INTRODUCTION

One of the major differences between democracies and non-democracies is whether or not political leaders are chosen by competitive elections. Citizens under non-democratic regimes are given an unequal chance of becoming a political leader, as political offices and power are concentrated in the hands of the few. Moreover, political positions in non-democracies are often inherited within a family. By contrast, political positions under democracy are open to everybody. All citizens are entitled to run for public office and exercise political power once they win an election.

Political positions are no longer hereditary in modern democracies, yet political inheritance continues to exist. Some modern democracies allow for "the de fact inheritance of political power" (Dal Bo, Dal Bo, and Snyder, 2009, 116). Dynastic politicians, whose family members have also held similar political positions in the past, have occupied a sizable portion of political offices in many parts of the world. In the United States, Hess (1966, 1) notes that "there have been some 700 families in which two or more members served in Congress, and they account for nearly 1,700 of the 10,000 men and women who have been elected to the federal legislature since 1774." The proportion of dynastic legislators has decreased over the years (Clubok, Wilensky and Berghorn, 1969), yet even after the 1960s, 7 percent of the U.S. House members can still be classified as dynastic (Dal Bo, Dal Bo and Snyder, 2009).

Political dynasties are present in other countries as well. Dynastic legislators are prominent in Japan; about one third of the legislators in the Lower House between 1970 and 2000 have relatives who have served in the national parliament (Ishibashi and Reed, 1992; Taniguchi, 2008). Another example is Mexico, where 20 to 40 percent of politicians at the national level have family ties to other politicians (Camp, 1982,

1995). In Italy, some famous politicians are the relatives of other politicians (Chirico and Lupoli, 2008), and both the Philippines and India have a sizable number of dynastic politicians in their parliaments.

Despite the persistence of political dynasties in many democratic countries, little is known about political consequences of dynastic legislators. Do political dynasties have any impact on policy formation and the level of electoral competition? If so, how? What is an normative implication of their presence for the democratic political process?

Only a few prior studies offer answers to these questions. Using data on political dynasties in the United States, Dal Bo, Dal Bo and Snyder (2009) show that legislators who served for multiple terms have a higher probability that their relatives are elected for the same office in the future. This is partly because political capital such as name recognition and ties with political machines can be inherited within families. Feinstein (2010) shows that dynastic politicians receive an additional 4% increase in the two party vote share in congressional elections because of their "brand name advantage." Further, Asako et al. (2010) demonstrate that dynastic politicians bring a larger amount of fiscal transfers to their districts than non-dynastic counterparts, but the fiscal transfers delivered by dynastic politicians generate worse economic consequence for a large fraction of citizens. These studies imply that political dynasties possess considerable electoral advantages (Dal Bo, Dal Bo, and Snyder, and Feinstein) and also that their presence affects the welfare of voters (Asako et al.).

This paper offers a new theory and evidence for the relationship between dynastic candidates and the level of electoral competition. Specifically, we ask whether dynastic candidates with electoral and legislative advantages undermine the role of

electoral competition as a device for choosing desirable representatives for the citizens. Our theory departs from Dal Bo et al. (2009) and Feinstein (2010) by incorporating both electoral advantages (e.g., campaign resources) and legislative advantages (e.g., bargaining power in the legislature) of dynastic candidates into a model of electoral competition between dynastic and non-dynastic candidates.

The first part of this paper develops a model that shows how candidates from dynastic families with electoral and legislative advantages affects the level of electoral competition. Our model examines the role of dynastic candidates by combining the citizen candidate model (Osborne and Slivinski, 1996; Besley and Coate, 1997) and the legislative bargaining model (Baron and Ferejohn, 1989).[1] Our model indicates that dynastic candidates enjoy more rents since they have electoral advantages than non-dynastic candidates, yet dynastic candidates do not obtain rents too much so that they can retain a higher probability of winning. As a result, in addition to the rent, dynastic candidates always enjoy a higher probability of winning and a higher vote share than non-dynastic candidates. Moreover, our model also indicates that dynastic candidates crowd out non-dynastic candidates by discouraging them from running.

We test these predictions using data on Japanese politicians. Japan is an ideal case for this study for three reasons. First, dynastic legislators occupy a sizable portion of the national Parliament, as noted above. In addition, there is ample variation in

[1]Our modeling approach is also drawn from Besley, Persson and Sturn (Forthcoming) that analyzes the impact of electoral competition on policy formation by introducing a probabilistic model and the role of rent. There are other related models in the literature, but our model differs from them in a notable way. In a similar effort to explain the role of candidate types, Chattopadhyay and Duflo (2004) and Gehlbach, Sonin and Zhuravskaya (Forthcoming) use the framework of the citizen candidate model, but their models do not contain legislative bargaining. McKelvey and Riezman (1992) also study candidates with legislative advantages using the legislative bargaining model, but they do not consider endogenous candidates. Morelli (2004) combines the citizen candidate model with the legislative bargaining model, but candidates all belong to the same type in his model, while our model considers two different types of candidates. In addition, they do not consider a probabilistic voting.

the geographical and temporal distributions of dynastic politicians. Second, data on politicians' family background are readily available. Third, detailed data on elections are available, which enables us to test the predictions of the model. Using the district-level data on election returns in four Lower House elections between 1996 and 2005, we find evidence that supports the predictions of our model.

2 The Model

2.1 Setup

This section presents a model of electoral competition between dynastic and non-dynastic candidates. Suppose that some potential candidates decide to run or not for the legislature in each district. One of the candidates is a dynastic candidate who is a child of the retiring incumbent.[2] There is also a (size one) continuum of voters.

Before the election, candidates who decide to run announce their campaign platforms. Voters cast a vote on one of the candidates. A winning candidate, or a legislator, negotiates in the legislature to obtain a distribution of government transfers for the district. The legislator spends this distribution on policies in the district. The details are discussed in the subsequent paragraphs.

2.1.1 Policy

Once elected, legislators bargain in the legislature over a distribution of benefits. Suppose that the legislature has odd $l \geq 3$ members, who are elected from l districts. At

[2]We assume that there is only one dynastic candidate in each district. We define candidates as dynastic only when they inherit the district from the retiring incumbent. It is rare that two dynastic candidates run for office in the same district, as showed in Section 3.

the beginning of the legislative process, one of the l legislators is chosen as an agenda setter with the probability p_k, where $\sum_k p_k = 1$. Assume that all non-dynastic legislators have the same probability of becoming an agenda setter, p_N, while the probability for all dynastic legislators is given by $p_D = \alpha p_N$. The value of α captures the bargaining power of dynastic legislators in the legislature when the power of non-dynastic legislators is normalized to one. We would expect that the bargaining power of dynastic legislators should be higher than that of non-dynastic legislators because dynastic legislators can inherit some of their predecessors' political resources such as policy expertise and personal ties. We thus assume $\alpha > 1$.

The agenda setter proposes distribution $\mathbf{d} = (d_1, ..., d_l)$ of the pool of nonnegative distributive benefits, where $\sum_k d_k = 1$. Legislators then vote to approve or reject $\mathbf{d}$, where $\mathbf{d}$ is adopted if more than $(l-1)/2$ legislators approve it. If the proposal is approved, legislators receive the distribution of benefits specified in the proposal. If it is defeated, a policy with a default distribution is implemented, and we assume that this default is zero without loss of generality. We consider the legislative ultimatum game where amendments are offered under a closed rule as in Baron and Ferejohn (1989). Our result can hold even if the infinitely repeated game is considered, as discussed below.

Once the distribution of benefits is determined, legislators spend the benefits in their districts. Suppose that legislators allocate the distribution to policy x and y where $x + y = d_k$ in district k. Policy x will benefit all voters, and the payoff for each voter is x.[3] In contrast, policy y generates benefits only to a fraction $\eta < 1/2$ of the voters. The marginal benefit from policy y is lower than the one from policy x. That

[3]Since we consider a size one continuum of voters, the sum of the all citizens' payoff is also x.

is, policy y is less efficient, and the marginal benefit from policy y is $0 < \beta < 1$. We assume that $x = \lambda d_k$, and $y = \beta(1-\lambda)d_k$ in the district k where $0 \leq 1-\lambda \leq 1$ is the ratio of the rent. Suppose $\dfrac{\beta}{\eta} > 1 > \beta > 0$. This means that it is optimal for the small group of voters that benefit from the rent to set $\lambda = 0$, yet the average utility for all voters in the district is higher when $\lambda = 1$; i.e. policy x is an "appropriate" policy which is preferred by the majority of voters, while policy y is a distorted policy preferred only by the small segment of voters.

Denote d_D and d_N as the expected amount of distribution of dynastic and non-dynastic candidates respectively, and λ_D and λ_N as the value of λ chosen by dynastic and non-dynastic candidates respectively.

2.1.2 Election

There are two types of voters: independent voters and voters who belong to a support group of candidates. Regardless of their dynastic status, candidates have their own support group, and voters in the group prefer their candidate regardless of the candidate's policy. Candidates will spend a portion of distributive benefits for their supporting group as policy y. We assume that the number of voters in each group is the same for all candidates. The size of support groups is equal to $\eta < 1/2$, as defined above. Thus, the winner is decided by independent voters' choice. In the following sections, we ignore the effect of voters in the supporting groups in order to simplify our analysis, and we analyze only the independent voters who are referred to as "voters."[4]

Voters vote sincerely; thus they play only weakly undominated strategies. Voters'

[4]Even if we introduce the effects of voters in the support groups, the results do not change, except that the difference in vote shares between dynastic and non-dynastic candidates becomes smaller. However, the sign of the difference will not be affected.

payoff from a candidate depends on two items. First, they care about the size of policy x set by the candidate. Second, voters care about the type of candidates. Voter i's payoff is defined as $\lambda_D d_D + \varpi_i$ when a dynastic candidate wins and $\lambda_N d_N$ when a non-dynastic candidate wins. The value of ϖ_i can be both positive or negative. If $\lambda_D d_D = \lambda_N d_N$, voter i prefers a dynastic candidate when $\varpi_i > 0$, and prefers a non-dynastic candidate when $\varpi_i < 0$. We suppose that voters do not care about any difference among non-dynastic candidates other than their policy. That is, if two non-dynastic candidates propose an identical policy, the voters are indifferent between the two. The value of ϖ_i affects only the competition between dynastic and non-dynastic candidates. Therefore, when two or more non-dynastic candidates run, and they announce the same policy, then they have the same (expected) vote shares and the same probability of winning. If one non-dynastic candidate announces a higher value of λ_N than other non-dynastic candidates, then this non-dynastic candidate receives all the votes cast for non-dynastic candidates.

Suppose that the number of non-dynastic candidates who run is $n \geq 1$, and a dynastic candidate also runs. We assume that ϖ_i is uniformly distributed on $[\gamma - \frac{n}{(n+1)\phi}, \gamma + \frac{1}{(n+1)\phi}]$. An aggregate popularity shock γ is uniformly distributed on $[-\frac{n}{(n+1)\xi}, \frac{1}{(n+1)\xi}]$. These distributions are set so that both dynastic and non-dynastic candidates will have the same (expected) vote share ($\frac{1}{n+1}$) and probability of winning ($\frac{1}{n+1}$) when $\lambda_D d_D = \lambda_N d_N$.[5] In this case, voter i casts a ballot for a dynastic candidate whenever $\varpi_i + \lambda_D d_D - \lambda_N d_N > 0$, so the (now random) share of voters who support a dynastic

[5]When three or more candidates run, it seems better to consider several random variables rather than a single random variable ϖ_i. However, it is well known that analytical solutions to such probabilistic models of multi-candidate competition do not generally exist (See Adams, III and Grofman (2005)). Thus, we introduce only one random variable in order to derive an equilibrium. Additionally, the purpose of this paper is to examine the effect of a dynastic candidate, so we ignore the difference among non-dynastic candidates.

candidate is $\phi[\lambda_D d_D - \lambda_N d_N + \gamma + \frac{1}{(n+1)\phi}]$.

Using this parametrization, the condition for the victory of a dynastic candidate, assuming an interior solution, is;

$$\phi[\lambda_D d_D - \lambda_N d_N + \gamma + \frac{1}{(n+1)\phi}] > \frac{1}{n+1}. \tag{1}$$

Note that if the vote share of a dynastic candidate is higher than $\frac{1}{n+1}$, a dynastic candidate wins with certainty since the remaining votes are equally divided to non-dynastic candidates, and the vote share of each non-dynastic candidate will be lower than $\frac{1}{n+1}$. This condition can be rewritten as $\gamma > -(\lambda_D d_D - \lambda_N d_N)$. We denote the probability that a dynastic candidate wins by $\pi(\lambda_D, \lambda_N)$. In this case, $\pi(\lambda_D, \lambda_N) = 1$ if $\xi(\lambda_D d_D - \lambda_N d_N) > 1/(n+1)$, and $\pi(\lambda_D, \lambda_N) = 0$ if $\xi(\lambda_D d_D - \lambda_N d_N) < -1/(n+1)$. In other cases, $\pi(\lambda_D, \lambda_N) = 1/(n+1) + \xi(\lambda_D d_D - \lambda_N d_N)$.

The decision of potential candidates to run or not depends on a fixed cost of running for office, a benefit from rents, and the probability of winning. We assume that the cost of running for non-dynastic candidates, $c_N > 0$, is greater than the cost of running for dynastic candidates, c_D. This assumption seems reasonable, because dynastic candidates can inherit organizational resources for campaigns from their family members. To simplify, we assume that a dynastic candidate always has an incentive to run, so we set $c_D = 0$ without loss of generality. The value of c_D can be replaced by any positive value under which a dynastic candidate always decides to run. This assumption also ensures that at least one candidate always decides to run in an equilibrium.

Candidates are office-motivated and a rent seeker. They do not care about policy x, although the value of x affects the probability of winning. The benefit from holding

office is $v > 0$ which is not related with policy. Assume that the benefit from holding office is not too high, and that $v < \frac{\beta}{\eta}\frac{1}{2\xi}$. Candidates can also obtain a part of rents in implementing policy $y = \beta(1-\lambda)d$. For simplicity, we assume that candidates can obtain y/η if they win and obtain the positive amount of distribution in the legislature since η of the voters (including candidates themselves) in the district receive y. It is possible to interpret that y/η as the payment to a politician from his/her support group.

Related to y, candidates announce a campaign platform about λ before election and they can commit to it. The expected payoff of a dynastic candidate is;

$$\pi(x_D, x_N)\left(\frac{\beta}{\eta}(1-\lambda_D)d_D + v\right). \tag{2}$$

The expected payoff of a non-dynastic candidate is;

$$(1-\pi(x_D, x_N))\left(\frac{\beta}{\eta}(1-\lambda_N)d_N + v\right). \tag{3}$$

We consider a subgame perfect equilibrium. The timing of the game is summarized as follows:

1. In each district, potential candidates decide to run or not.
2. In each district, candidates announce a campaign platform, λ.
3. In each district, voters choose one of the candidates. A winner is decided by a plurality rule, with ties being settled using an equal-probability rule. If only one candidate runs for office in the district, this candidate wins with certainty.
4. The elected legislators bargain over a distribution of benefits.

(a) Nature decides an agenda setter.

(b) The agenda setter offers a proposal.

(c) Legislators vote to approve or reject the proposal. If it is approved, the proposal is implemented. If not, the distribution for each district is zero.

5. The legislator spends the distribution on policy x and y.

2.2 Legislative Bargaining

Legislative bargaining is analyzed first. We consider an ultimatum game; if a proposal is not approved, the game ends, and each member receives zero. In this case, the agenda setter proposes to keep all the resources, and other members approve it (see Proposition 1 of Baron and Ferejohn (1989)). Therefore, the expected value of distribution for the district is the same as the probability of being an agenda setter. Let d_j^m be the expected amount of distribution, where $m \leq n$ is the number of dynastic legislators in the legislature, and $j \in \{D, N\}$ is the legislator's type, dynastic (D) or non-dynastic (N). This is the expected value after the number of a dynastic candidate m is decided (thus at the beginning of period 3). Since the probability of being the agenda setter is identical for the same type of legislators, only the type of legislator in the district and the total number of the dynastic legislators in the legislature decide the amount of distribution allocated to the district. Then, $p_N = d_N^m = \dfrac{1}{n + (\alpha - 1)m}$ and $p_D = d_D^m = \dfrac{\alpha}{n + (\alpha - 1)m}$.

The district with a dynastic legislator receives a greater distribution of benefits than the one with a non-dynastic legislator. That is, $d_D^m > d_N^m$ for any $0 < m < n$. As α increases, d_D^m increases and d_N^m decreases: i.e., larger bargaining power of dynastic legislators results in the larger allocation of benefits for districts with a dynastic

legislator.

Even if the game is infinitely repeated, the allocation of benefits to each legislator is nondecreasing in the probability of being an agenda setter under a stationary subgame perfect equilibrium (Eraslan, 2002).[6] Therefore, $d_D^m > d_N^m$ even if the repeated model is introduced, and we consider only an ultimatum game to avoid multi-equilibria.[7]

If $0 < \pi(x_D, x_N) < 1$, the number of dynastic legislators is uncertain at period 1. However, even when m is uncertain, $d_D^m > d_N^m$ for any $0 < m < n$. Thus, the dynastic candidate's expected amount of distribution at period 1 is still higher than that of a non-dynastic candidate. Denote d_D and d_N as the expected amount of distribution *at period 1* of dynastic and non-dynastic candidates respectively. Then, $d_D > d_N$.

2.3 Campaign Platform

2.3.1 When Two Candidates Run

Suppose that a dynastic candidate and one non-dynastic candidate run. That is, $n = 1$. We assume that:

Assumption 1 $\frac{1}{3}(d_D - d_N) < \frac{1}{2\xi} - \frac{\eta}{\beta}v < \frac{1}{3}(d_D + 2d_N)$

[6]For example, McKelvey and Riezman (1992) examine one of the multi-equilibria where the agenda setter selects a minimal winning coalition and gives $1/l$ for each member in a coalition. In such a case, when a legislator does not become the agenda setter, the expected utility is the same, regardless of the probability of being the agenda setter. The premium for the agenda setter is $(l+1)/2l - 1/l = (l-1)/2l$. Thus, the critical difference between dynastic and non-dynastic legislators in their expected utility is equivalent to the probability of being an agenda setter times this premium, so $d_D^m > d_N^m$.

[7]When the bargaining game is finitely repeated, the result depends on the number of repetition. For example, if the game is repeated twice, the agenda setter does not want to make a coalition with a dynastic legislator since the expected utility of a dynastic legislator in the ultimatum game is higher than that of a non-dynastic legislator. However, in the first period, the expected utility of a non-dynastic candidate may become higher than that of a dynastic legislator. If the game is repeated three times (or more), the agenda setter may not want to make a coalition with a non-dynastic legislator. A dynastic legislator's expected utility then becomes higher. Indeed, Norman (2002) shows that even when legislators are symmetric, there are many equilibria in a finitely repeated game. This suggests that a finitely repeated game is not appropriate for our research question.

In other words, the value of ξ is neither too high nor too low. With this assumption, an equilibrium is an interior solution. That is, $\lambda_j \in (0,1)$ for $j = D, N$ and $\pi(\lambda_D, \lambda_N) \in (0,1)$. Other cases without this assumption are discussed later.

Differentiating (2) and (3) by λ_D and λ_N, respectively, produces;

$$\xi d_D(\frac{\beta}{\eta}(1-\lambda_D)d_D + v) - \frac{\beta}{\eta}d_D\left[\frac{1}{2} + \xi\left(\lambda_D d_D - \lambda_N d_N\right)\right], \tag{4}$$

$$\xi d_N(\frac{\beta}{\eta}(1-\lambda_N)d_N + v) - \frac{\beta}{\eta}d_N\left[\frac{1}{2} - \xi\left(\lambda_D d_D - \lambda_N d_N\right)\right]. \tag{5}$$

When a candidate increases λ, the probability of winning increases (the first term), but the expected amount of rents decreases (the second term). The following best response functions can be derived after some calculations:

$$\lambda_D = \frac{1}{2} + \frac{1}{2d_D}\left[\frac{\eta}{\beta}v - \frac{1}{2\xi} + \lambda_N d_N\right], \tag{6}$$

$$\lambda_N = \frac{1}{2} + \frac{1}{2d_N}\left[\frac{\eta}{\beta}v - \frac{1}{2\xi} + \lambda_D d_D\right]. \tag{7}$$

As the opponent's expected amount of x increases, candidates spend more on policy x. By substituting λ_N and λ_D, we derive the following values of λ that are announced by candidates in equilibrium:

$$\lambda_D = \frac{2}{3} + \frac{1}{d_D}\left[\frac{\eta}{\beta}v - \frac{1}{2\xi} + \frac{1}{3}d_N\right], \tag{8}$$

$$\lambda_N = \frac{2}{3} + \frac{1}{d_N}\left[\frac{\eta}{\beta}v - \frac{1}{2\xi} + \frac{1}{3}d_D\right]. \tag{9}$$

If the opponent obtains a larger amount of distribution, then candidates increase λ; i.e., the candidate gives up rents in order to win the election. When candidates are more uncertain about voters' preference (lower ξ), they set lower λ and enjoy more rents. When ξ is low, even if candidates increase λ, their prospect of winning does not increase much. Then they find no incentive to increase λ. At the same time, the comparative statics about the own expected amount of distributions is ambiguous. Let us consider a case of dynastic candidates without loss of generality. When $\frac{1}{2\xi} - \frac{\eta}{\beta}v > \frac{1}{3}d_N$, λ_D increases as d_D increases. When $\frac{1}{2\xi} - \frac{\eta}{\beta}v < \frac{1}{3}d_N$, λ_D decreases as d_D increases.

The difference in the amount of spending on policy x is $x_D - x_N = \lambda_D d_D - \lambda_N d_N = (d_D - d_N)/3$. Dynastic candidates announce to spend one third of this difference to policy x, and they will spend the remaining rents for their own support group. As a result, the probability that a dynastic candidate wins is;

$$\pi(\lambda_D, \lambda_N) = \frac{1}{2} + \frac{\xi}{3}\left[d_D - d_N\right]. \tag{10}$$

Since $d_D > d_N$, a dynastic candidate has a higher probability of winning election. It is obvious that the (expected) vote share is also higher for a dynastic candidate. Denote the expected payoff of type-j (dynastic or non-dynastic) candidate when the number of non-dynastic candidates who run is n by V_j^n. The expected payoffs are:

$$V_D^1 = \frac{\beta}{\eta}\left[\frac{1}{2\xi} + \frac{1}{3}(d_D - d_N)\right]^2, \tag{11}$$

$$V_N^1 = \frac{\beta}{\eta}\left[\frac{1}{2\xi} - \frac{1}{3}(d_D - d_N)\right]^2. \tag{12}$$

Thus, the expected payoff for a dynastic candidate is also higher.

Finally, consider a situation where Assumption 1 does not hold. If $\frac{1}{3}(d_D - d_N) \geq \frac{1}{2\xi} - \frac{\eta}{\beta}v$, a non-dynastic candidate announces $\lambda_N = 1$ (and $\lambda_D < 1$).[8] When the value of ξ is too high, it means that the aggregate shock is not so large. Thus, in order to have the positive probability of winning, a non-dynastic candidate has to set $\lambda_N = 1$.

If $\frac{1}{3}(d_D + 2d_N) < \frac{1}{2\xi} - \frac{\eta}{\beta}v < \frac{1}{3}(2d_D + d_N)$, $\lambda_N = 0$ and $\lambda_D > 0$. If $\frac{1}{3}(2d_D + d_N) < \frac{1}{2\xi} - \frac{\eta}{\beta}v$, $\lambda_N = \lambda_D = 0$. When ξ is too low, it means that the aggregate shock is too large. In this case, even if candidates increase the value of λ, the probability of winning is not affected much. Thus, they do not want to increase λ to win an election, and they use all of the allocated distributions as rents. The probability of winning is same for both dynastic and non-dynastic candidates in this case

2.3.2 When Three or More Candidates Run

Suppose that a dynastic candidate and $n \geq 2$ non-dynastic candidates run. First of all, if two or more non-dynastic candidates run, non-dynastic candidates set $\lambda_N = 1$. As noted above, we suppose that voters do not care about any difference among non-dynastic candidates other than their policy. If one non-dynastic candidate announces higher λ_N than other non-dynastic candidates, the non-dynastic candidate can obtain all votes for other non-dynastic candidates. That is, the probability of winning among non-dynastic candidates is discrete. As a result, non-dynastic candidates never receive any rents because of this competitiveness of contests among non-dynastic candidates.

Assume an interior solution. We can derive the amount of λ_D chosen by a dynastic candidate as;

[8] If $-\frac{1}{3}(d_D - d_N) \geq \frac{1}{2\xi} - \frac{\eta}{\beta}v$, $\lambda_D < 1$. However, since we assume $\frac{1}{2\xi} - \frac{\eta}{\beta}v > 0$ and $d_D > d_N$, it never happens.

$$\lambda_D = \frac{1}{2} + \frac{1}{2d_D}\left[\frac{\eta}{\beta}v - \frac{1}{(n+1)\xi} + d_N\right], \tag{13}$$

As a result, the probability that a dynastic candidate wins is;

$$\pi(\lambda_D, \lambda_N) = \frac{1}{2}\left[\frac{1}{n+1} + \xi(d_D - d_N + \frac{\eta}{\beta}v)\right], \tag{14}$$

and the probability of winning for each non-dynastic candidate is;

$$(1 - \pi(\lambda_D, \lambda_N))/n = \frac{2n+1}{2n(n+1)} - \frac{1}{2n}\xi(d_D - d_N + \frac{\eta}{\beta}v). \tag{15}$$

The expected payoffs are:

$$V_D^n = \frac{\beta}{4\xi\eta}\left[\frac{1}{n+1} + \xi(d_D - d_N + \frac{\eta}{\beta}v)\right]^2, \tag{16}$$

$$V_N^n = \left[\frac{2n+1}{2n(n+1)} - \frac{1}{2n}\xi(d_D - d_N + \frac{\eta}{\beta}v)\right]v. \tag{17}$$

Both payoffs, λ_D and $\pi(\lambda_D, \lambda_N)$ decrease as n increases.

2.4 Endogenous Candidates

This subsection analyzes the decision to run for each type of potential candidates. If there is only one candidate, this candidate will set $\lambda = 0$, and spend all of the distribution as his/her own rents. This candidate wins with certainty, so the expected payoff is $\frac{\beta}{\eta}d_j + v$, which is higher than V_j^n for any $n \geq 1$ and $j = N, D$.

If there is no candidate in a district, at least a dynastic candidate has an incentive to run because we assume $c_D = 0$. For the same reason, if only one non-dynastic

candidate decides to run, a dynastic candidate has an incentive to run. Thus, there is no equilibrium with no candidate or with only one non-dynastic candidate running for an election.

Suppose that only a dynastic candidate runs. The dynastic candidate does not have an incentive to deviate. In this case, $\lambda_D = 0$, and non-dynastic candidates' (and voters') payoff is zero. If a non-dynastic candidate deviates and runs, this non-dynastic candidate's payoff becomes $V_N^1 - c_N$. Therefore, if $V_N^1 < c_N$, a non-dynastic candidate does not run, and it is an equilibrium in which only a dynastic candidate runs.

Suppose that a dynastic and one non-dynastic candidates run. This dynastic candidate has no incentive to deviate. If the non-dynastic candidate does not run, the expected payoff becomes zero. Thus, if $V_N^1 \geq c_N$, the non-dynastic candidate does not deviate. If another non-dynastic candidate runs, the expected payoff of this non-dynastic candidate becomes V_N^2, so if $V_N^2 < c_N$, another non-dynastic candidate does not run. As we showed, V_N^n decreases as n increases. Thus, if $V_N^n \geq c_N > V_N^{n+1}$, a dynastic and n non-dynastic candidate runs in equilibrium where $n \geq 2$.

As a result, the equilibria in our model are summarized as follows.

Proposition 1 *1. If $V_N^1 < c_N$, only a dynastic candidate runs. This candidate announces $\lambda_D = 0$ and wins with certainty.*

2. If $V_N^1 \geq c_N > V_N^2$, a dynastic and one non-dynastic candidates run, and they announce λ_D and λ_N defined by (6) and (7). The probability of winning of a dynastic candidate is defined by (10).

3. If $V_N^n \geq c_N > V_N^{n+1}$, a dynastic and n non-dynastic candidates run where $n \geq 2$, and they announce λ_D defined by (13) and $\lambda_N = 1$. The probability of winning for the dynastic candidate is defined by (14).

2.5 Hypothesis

We consider the implications of our model for electoral competitiveness. When dynastic and non-dynastic candidates compete, a dynastic candidate has a higher (expected) vote share and a higher probability of winning. When no dynastic candidate decides to run for office in a district, and both candidates are non-dynastic, they have the same probability of winning, according to the model. That is, electoral contests between non-dynastic candidates should be more competitive than those between a dynastic and non-dynastic candidate.

Our model presents two reasons as to why dynastic candidates are more advantageous than non-dynastic candidates. First, dynastic candidates have stronger legislative power, and voters expect them to bring a larger amount of distributions to the district even though they use a part of them as rents for their support group (and themselves). In fact, Asako et al. (2010) show that dynastic candidates deliver a larger amount of fiscal transfers to their districts, once they are elected, than non-dynastic candidates using Japanese data. Second, dynastic candidates possess more organizational and financial resources for campaigns and raise the cost of running, which in turn discourage potential non-dynastic candidates from running.

We draw the following hypotheses for the empirical section:

H1 Dynastic candidates enjoy a higher probability of winning than non-dynastic candidates.

H2 Dynastic candidates enjoy a higher vote share than non-dynastic candidates.

H3 Dynastic candidates discourage non-dynastic candidates from running.

Before turning to the empirical analysis, we draw some some normative implications

from our model. As noted above, dynastic candidates have electoral advantages for two reasons: their stronger legislative power and the crowding out effect. From a normative point of view, the latter can be more consequential. If two or more non-dynastic candidate run, dynastic candidates cannot spend too much on a distorted policy (y) because non-dynastic candidates never receive any rent, and elections are more competitive. If the number of non-dynastic candidates increases, then the amount of rents obtained by dynastic candidates decreases. However, because of the high cost of running for non-dynastic candidates, they may not have an incentive to run, which results in higher rents stolen by dynastic candidates. In the most extreme case, in which only a dynastic candidate runs, he will spend all of the distributions on y. In this case, even though voters prefer potential non-dynastic candidates, none of the non-dynastic candidates runs. In this sense, dynastic candidates are "bad" for the district as indicated by Asako et.al. (2010).

Moreover, even when a dynastic candidate is desirable *for a district*, the presence of dynastic candidates may not be desirable *for the nation*. In the nation as a whole, the amount of resources to distribute for districts is limited. As we showed, in equilibrium, dynastic candidates will spend distributions on a distorted policy much more than non-dynastic candidates. Thus, at the national level, if there are more dynastic legislators, more resources will be spent on distorted policies, and the overall welfare of the nation will decrease. In contrast, if two or more non-dynastic candidates run in each district, and all elected candidates are non-dynastic, the entire resources of the nation will be used on an appropriate policy, which maximizes the social welfare of the nation. This discussion implies that the presence of dynastic legislators poses negative consequences for political representation.

3 EMPIRICAL ANALYSIS

We test these hypotheses using data on Japanese politicians. In each of the following subsections, we first present an econometric model for testing our hypotheses. We then describe our data required for estimation and report results. We focus on candidates and representatives running for the recent Lower House elections between 1996 and 2005 in Japan.[9]

3.1 H1: The Probability of Winning

Our first hypothesis indicates that dynastic candidates have a higher probability of winning compared to non-dynastic candidates. In order to test this hypothesis, we estimate the following model:

$$\begin{aligned} Prob(Win = 1)_{ik} = \quad & \beta[Dynasty]_{ik} + \gamma_1[Female]_{ik} + \gamma_2[Age]_{ik} + \gamma_3[Local]_{ik} \\ & + \gamma_4[LDP]_{ik} + \gamma_5[DPJ]_{ik} + \gamma_6[Komei]_{ik} \\ & + \gamma_7[Incumbent]_{ik} + \gamma_8[Term]_{ik} + \rho_k + \epsilon_{ik}, \end{aligned} \tag{18}$$

where $Prob(Win = 1)_{ik}$ denotes the probability that candidate i wins an election in one of the 300 single-member districts (SMD). Candidates are assigned 0 even if they gained a seat in the PR tier after being defeated in a single-member district. ρ_k denotes a district-fixed effect, while ϵ_{ik} denotes a candidate-specific error term. With ρ_k, the model exploits variation across candidates within a district.

[9]Japan held its first Lower House election under the current electoral system in 1996. We exclude the period before 1996 from the analysis in order to hold the effect of electoral system constant. After 1996, the Japanese Lower House employs a mixed-member system with 200 members elected under Proportional Representation (PR), and 300 members elected from single-member districts. After 2002, the number of seats for the PR tier was reduced to 180. Our analysis excludes members elected from the PR tier.

$[Dynasty]_{ik}$ is a dummy variable that equals 1 if candidate i in district k is "dynastic", which is defined as those whose parent was the member of the Diet in the past. In order to create this variable, we first code each candidate for their dynastic status. Because it is extremely challenging to find the dynastic status of those who lost elections, we limit our search to candidates who ran in the 2005 General election ($N = 989$). Thus, in this part of the analysis, the sample represents candidates who ran in 2005. For candidates who *won* the election, we obtained information on their dynastic status from a booklet called "*Kokkai Binran*"(Diet Manual). For those who *lost* the election, we mainly consulted archives of various newspapers for candidate profiles. Because dynastic legislators are of great interest to the Japanese general public, newspaper articles mentioned their dynastic status in most cases. When newspaper did not carry candidates profiles, we consulted other sources, such as their web sites and biographical accounts by others.

Table 1 summarizes the relationship between dynastic status and election results. In 2005, 101 candidates (10.21 percent) are categorized as "dynastic" in our data set. Among those, 76 candidates (75.25 percent of the total dynastic candidates) won in the SMD. Only 25 dynastic candidates (24.75 percent) lost the election in 2005. In contrast, only 25.23 percent of non-dynastic candidates won the election in the SMD. This low figure partly reflects the fact that most dynastic candidates are from major parties, but non-dynastic candidates are not as successful as dynastic ones even if we only look at non-dynastic candidates from major parties, as shown in Table 2.[10] According to the table, among non-dynastic candidates from major parties, only 40.80 percent of candidates were elected in the SMD in 2005. This is a sharp contrast to

[10]We define major parties as the Liberal Democratic Party, the Democratic Party of Japan, and the Komei party.

dynastic major-party candidates whose electoral success rates are close to 75 percent.

[Tables 1 and 2 Here]

Another noteworthy point is that there were only five districts where two dynastic candidates ran against each other. Thus, our assumption that there is only one dynastic candidate in the district is compatible with the data, at least in 2005.

Equation (18) includes several variables that control the impacts of demographic and political attributes of candidates. In equation 18, $[Female]_{ik}$ equals one if a candidate is female. $[Age]_{ik}$ denotes the age of candidates in 2005. $[Local]_{ik}$ is an indicator variable that equals one if a candidate served as a governor, mayor, or representative at the prefecture- or municipality-level before running for the Lower House election. The data for these variables come from newspaper articles and other sources.

$[LDP]_{ik}$, $[DJP]_{ik}$, and $[Komei]_{ik}$ denote the party affiliation of candidates. $[LDP]_{ik}$ equals one if a candidate is from the Liberal Democratic Party (LDP). The LDP has been in power before the election and then predominantly won the election of 2005. $[DJP]_{ik}$ equals one if a candidate belongs to the Democratic Party of Japan. $[Komei]_{ik}$ equals one if a candidate belongs to the Komei party. These three parties are the major parties that occupy most of the seats in the Lower House before the 2005 election. $[Term]_{ik}$ is the number of times that the candidate has been elected to the Lower House. $[Incumbent]_{ik}$ is a dummy variable for their incumbency status.[11] The data for these variables are obtained from "The Japan Election Data, 1996-2005" and "*Kokkai Binran*"(Diet Manual).[12]

[11] Those who served in the Lower House at the time of the 2005 election receive 1 for this variable regardless of whether they were elected from the PR and SMD tier in the previous election.

[12] "The Japan Election Data, 1996-2005" are created by Steven Reed.

Table 3 presents estimation results. Column (1) is based on the restricted model that includes the dynastic status and the district fixed effects, while Column (2) is based on the full model that includes the dynastic status, the demographic and political attributes, and the district fixed effects. We employ a logit model because of the nature of the outcome variable. Standard errors are clustered by districts. According to Column (1), the positive coefficient associated with $[Dynasty]_{ik}$ suggests that dynastic candidates are more likely to win the 2005 election compared to non-dynastic counterparts. The result remains even after the demographic and political attributes of candidates are included in the model, as shown in Column (2). The estimates are statistically significant at the conventional level in both of the specifications. The estimated coefficient in Column (2) suggests that their probability of winning is 22 percent higher than non-dynastic candidates.[13]

[Table 3 Here]

Some of the control variables in Column (2) have predicted signs. Candidates belonging to the LDP, incumbent candidates, and candidates serving for longer terms, are more likely to win than candidates without those characteristics. The probability of winning is 56 percent higher for the LDP candidates than for the non-LDP candidates, while the probability is 47 percent higher for the incumbents than for the non-incumbents. Column (2) also suggests that female and younger candidates are more likely to win the seat than male and older candidates.

In sum, our analysis using the election results in 2005 offer evidence for the hypothesis that dynastic candidates enjoy the higher probability of winning, in comparison to

[13]We computed a difference in the predicted probabilities of winning between a dynastic and non-dynastic candidate, holding other variables constant.

non-dynastic candidates.

3.2 H2: Vote Share

Our second hypothesis states that dynastic candidates enjoy a higher vote share than non-dynastic candidates. We first test this hypothesis by using equation (18) and the election return in 2005. We replace $Prob(Win = 1)_{ik}$ with $Vote_{ik}$ that denotes the percent of vote share for candidate i in district k. The vote share is equal to the number of candidate i's votes divided by the total number of eligible votes cast. It ranges from 0 to 100. The model specifications are identical as those in Table 3. We expect that β in equation (18) is positive and statistically discernable from zero.

The results in Table 4 provides supportive evidence for the second hypothesis. The estimation result in column (1) is based on the model that includes the dynastic status, while the result reported in Column (2) is based on the model that includes the dynastic status and the demographic and political attributes of candidates. The district fixed effects are included in both models. Column (2) suggests that the coefficient associated with the dynastic status remains positive and statistically significant, even after the effects of demographic and political attributes of candidates are controlled. The positive coefficients associated with $[Dynasty]_{ik}$ in Columns (1) and (2) suggest that dynastic candidates enjoy higher vote shares compared to non-dynastic counterparts. The estimated coefficient in Column (2) implies that the dynastic status increases the vote share by 5.273 percent. Other variables have also predicted effects on the vote share.

Next, we expand our analysis with election returns in 1996, 2000, and 2003 as well as 2005. As noted above, it is difficult to identify dynastic status of candidates who

lost elections. Yet we can easily identify the dynastic status of candidates who were elected by consulting existing data sources and "*Kokkai Binran*"(Diet Manual). We expect that dynastic *winners* had a relatively easy victory compared to non-dynastic *winners*, which are likely to be indicated by larger vote shares and vote margins.

In this part of the analysis, we use winners' vote shares and vote margins as the dependent variables. We estimate the following model:

$$\begin{aligned} vote_{kt} = \quad & \beta[Dynasty]_{kt} + \gamma_1[Female]_{kt} + \gamma_2[Age]_{kt} + \gamma_3[Local]_{ky} \\ & + \gamma_4[LDP]_{ky} + \gamma_5[DPJ]_{kt} + \gamma_6[Komei]_{kt} \\ & + \gamma_7[Incumbent]_{kt} + \gamma_8[Term]_{kt} + \rho_j + \phi_t + \epsilon_{kt}, \end{aligned} \tag{19}$$

where $vote_{kt}$ is either vote share or vote margin of the winner in district k in election year t. The vote margin is defined as a difference in the percent of vote shares between the winner and the second-place candidate. Election results are taken from the "JED-M Database" (Mizusaki, various years). In equation (19), ρ_j denotes a prefecture fixed effect that controls the difference in demographic and political features of districts across prefectures, and ϕ_t denotes a election-year fixed effect that controls for any time-specific shock that can affect election results. ϵ_{kt} denotes a district specific error term. Note that the unit of analysis is the winner in each single-member district in election year t. The data cover all winners elected in the 1996, 2000, 2003, and 2005 Lower House elections. The number of observations is 1200.[14]

In equation (19), $[Dynasty]_{kt}$ equals one if the winner in district k in year t is dynastic and zero otherwise.[15] The dynastic information of legislators is taken from

[14]In each election, 300 legislators were elected.

[15]Our analysis is based on the assumption that no dynastic candidate lost the election. This assumption

several sources. For those elected in 1996, we used data compiled by Kabashima (2000). Because Kabashima's data covers only up to 1996, we updated his dataset for more recent lawmakers in two ways. As for conservative members of the Diet, we supplemented information with the data collected by Asano (2006). Most conservative legislators belong to the Liberal Democratic Party. For the rest of the legislators, we consulted "*Kokkai Binran*"(Diet Manual) to fill in the dynastic information. Table 5 presents the number of dynastic and non-dynastic legislators elected in each election. Other control variables are defined in the same manner as in the previous analysis.

[Table 5 Here]

Column (1) of Table 6 reports estimation results when the percent of vote shares is used as the dependent variable. The result is similar; dynastic winners had greater vote shares than non-dynastic ones. The vote shares of dynastic winners are higher than those of non-dynastic counterparts by 2.474 percentage points. In column (2), we use the vote margin as the dependent variable. The estimated β is positive, suggesting that dynastic candidates won by larger margins compared to non-dynastic winners. The average difference in vote margins between dynastic winners and non-dynastic winners is 3.604 percentage points.

[Table 6 Here]

3.3 H3: The Number of Candidates

Our third hypothesis states that dynastic candidates discourage non-dynastic candidates from running. In order to test this hypothesis, we examine whether the number

is partly supported by our analysis in the previous subsection.

of candidates in a district is lower when a dynastic candidate ran and won the seat, compared to when only non-dynastic candidates were competing against each other. If dynastic candidates enjoy higher electoral advantages than non-dynastic candidates, non-dynastic candidates are more likely to decide not to run against dynastic candidates, knowing that their chance of defeating dynastic candidates is slim. As a result, we would expect that the number of candidates is smaller in districts where the dynastic candidates entered the race and then won than districts where only non-dynastic candidates ran and won. For estimation, we use the same model (equation (19)) but replace the dependent variable with the number of candidates running in district k in election year t. We first estimate the model by including all candidates (regardless of their vote shares) in the calculation of the total number of candidates in districts (Column (1)). In order to exclude the possibility that dynastic candidates discourage only trivial candidates from running, we also calculate the number of candidates after excluding candidates who gained less than 10 percent (Column (2)) and 20 percent (Column (3)) of the total votes in each district. If the presence of dynastic candidates deters other candidates, β should be negative.

Table 7 shows estimation results. As hypothesized, districts that elected dynastic candidates had a lower number of candidates than districts that had non-dynastic candidates as winners. Column (1) shows that the number of candidates is smaller by 0.135 in districts where the the dynastic candidates won, in comparison to districts where the non-dynastic candidates won. The results hold even after the trivial candidates are excluded, as shown in Columns (2) and (3), although the coefficient associated with the dynastic status in Column (2) is not statistically significant at the 5 percent level. Some of the other variables have predicated signs. For example, as one would expect,

in districts where incumbents won, the number of candidates is fewer than in districts with open-seats or lost (therefore vulnerable) incumbents.

[Table 7 Here]

Our model suggests that dynastic candidates discourage non-dynastic candidates from running for office partly because dynastic candidates raise the cost of campaign. We test this possibility by examining the difference in the financial resources between dynastic and non-dynastic candidates. If dynastic candidates possess more financial resources, they can afford to pay more costs for campaigns, which in turn increases the financial cost of campaign for non-dynastic candidates. We measure the amount of financial resources in two ways. The first measure is the total amount of asset owned by candidates. The data on asset are available in 1996, 2000, 2003, and 2005 since all elected candidates are obligated to report their asset after the elections. The number of observations is 1197. The data come from newspaper reports. The second measure is the total amount of campaign revenue. The data on campaign revenue are also available for those years, yet only the part of the data are electronically compiled by Kabashima (2000). The number of observations is 297.

Table 8 presents the results. We regress the two measures of financial resources on the same set of variables in equation (19). Both the asset and campaign revenue are measured in one million yen. Columns (1) and (2) indicate that dynastic candidates are financially more resourceful than non-dynastic candidates. The difference in the asset is about 5 million yen, while the difference in the campaign revenue is 1.7 million yen. These findings are consistent with our assumption that the cost of running for dynastic candidates is lower than non-dynastic candidates.

[Table 8 Here]

CONCLUSION

This study examines how dynastic politicians with inherited political resources affect the level of electoral competition and entry decisions of potential candidates. Our model predicts that dynastic candidates with abundant campaign resources and strong legislative power have more electoral strength than non-dynastic candidates. Moreover, the presence of dynastic candidates discourage non-dynastic candidates from running for office because they raise the cost of running. Thus, electoral contests should be less competitive when dynastic candidates are facing non-dynastic opponents, compared to when non-dynastic candidates are competing against each other.

Our analysis using data on Japanese elections offer supportive evidence for our hypotheses. Dynastic candidates clearly enjoy a higher probability of winning and higher vote shares than non-dynastic candidates. Further, when dynastic candidates are running, the average number of candidates tends to be low, suggesting that their presence deters non-dynastic candidates from running for office. This crowding-out effect occurs partly because the dynastic candidates have more resources than non-dynastic candidates.

Does the presence of dynastic candidates undermine the role of elections as a device for choosing desirable representatives for the citizens? Our study suggests that the answer is yes. One of the implications of our model is that candidates extract less rent when they face competitive elections. Thus, less rent will be extracted when only non-dynastic candidates are running for office, because the level of electoral competition

is likely to be high. In contrast, electoral contests are much less competitive when dynastic candidates are running because they tend to discourage other candidates from running for office. This would result in higher rents extracted by dynastic candidates, which are then allocated to a small fraction of voters. In addition, our model implies that when there are more dynastic candidates, more resources will be spent on distorted policies, and the overall welfare of the nation will decrease.

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Table 1: Dynastic Status and Election Results in 2005

	Dynastic	Non-dynastic	Total
Won	87 (77.68%)	213 (24.29%)	300
Lost	25 (22.32%)	664 (75.71%)	689
Total	101 (100%)	872 (100%)	989

Note: All candidates who ran for the 2005 election are included.

Table 2: Dynastic Status and Election Results in 2005: Major Party Candidates Only

	Dynastic	Non-dynastic	Total
Won	85 (77.27%)	204 (39.53%)	289
Lost	25 (22.73%)	312 (60.47%)	337
Total	110 (100%)	516 (100%)	626

Note: Candidates who ran for the 2005 election and belonged to the LDP, DPJ, and Komei party are included.

Table 3: The Effect of Dynastic Status on the Probability of Winning in 2005

	(1)	(2)
Dynastic	3.771*	1.703*
	(0.468)	(0.678)
Female		1.358*
		(0.627)
Age		−0.102*
		(0.027)
Local politician		0.462
		(0.658)
LDP		3.899*
		(0.482)
DPJ		−0.739
		(0.536)
Komei		2.345
		(1.992)
Incumbent		4.045*
		(0.621)
Term		0.581*
		(0.167)
Constant	−2.522*	−0.645
	(0.213)	(1.324)
Pseudo R^2	0.159	0.637
N	989	

Note: Table entries are logit regression coefficients with robust standard errors in parentheses. Standard errors are clustered by districts. Estimates are based on candidates running for the 2005 Lower House election. The dependent variable is a binary variable that equals one if a candidate won the election. District fixed effects are included in the models. $*$ p $<$ .05 (one-tailed tests).

Table 4: The Effect of Dynastic Status on the Vote Share in 2005

	(1)	(2)
Dynastic	28.815*	5.273*
	(1.633)	(1.370)
Female		0.563
		(0.881)
Age		−0.170*
		(0.041)
Local politician		2.746*
		(0.974)
LDP		27.270*
		(1.209)
DPJ		17.497*
		(1.133)
Komei		21.188*
		(1.818)
Incumbent		12.431*
		(1.315)
Term		1.228*
		(0.279)
Constant	35.592*	30.635*
	(0.816)	(3.024)
Pseudo R^2	0.264	0.884
N	989	

Note: Table entries are linear regression coefficients with robust standard errors in parentheses. Standard errors are clustered by districts. Estimates are based on candidates running for the 2005 Lower House election. The dependent variable is the percent of vote shares. District fixed effects are included in the models. $*$ p $<$ .05 (one-tailed tests).

Table 5: The Number of Dynastic and Non-dynastic Candidates elected in the SMD

	Dynastic	Non-dynastic	Total
1996	84	216	300
2000	80	220	300
2003	85	215	300
2005	87	213	300

Note: All candidates elected for the SMD in 1996, 2000, 2003, and 2005 are included.

Table 6: The Effect of Dynastic Status on Vote Share and Margin in Four Elections

	(1) Vote Share	(2) Vote Margin
Dynastic	2.474*	3.604*
	(0.730)	(1.315)
Female	−0.036	2.864
	(2.004)	(2.433)
Age	−0.114*	−0.147*
	(0.037)	(0.054)
Local politician	0.623	0.007
	(0.575)	(0.837)
LDP	5.865*	5.713*
	(1.347)	(1.685)
DPJ	1.516	−0.523
	(1.348)	(1.802)
Komei	0.963	−1.873
	(1.559)	(1.753)
Incumbent	3.566*	5.439*
	(0.576)	(0.893)
Term	0.603*	0.784*
	(0.153)	(0.213)
1996	−4.894*	1.236
	(1.341)	(1.228)
2000	−1.523	4.441*
	(1.043)	(1.167)
2003	1.576*	2.996*
	(0.801)	(1.180)
Constant	46.919*	9.698*
	(2.012)	(2.962)
R^2	0.400	0.307
N	1200	

Note: Table entries are linear regression coefficients with robust standard errors in parentheses. Standard errors are clustered by prefectures. Estimates are based on winners elected for the 1996, 2000, 2003, and 2005 Lower House elections. The dependent variable in Column (1) is the percent of vote shares obtained by the winner, while the dependent variable in Column (2) is vote margin defined as a difference in vote shares between the winner and the second-place candidate. Prefecture fixed effects are included in the models. $*$ p $<$ .05 (one-tailed tests).

Table 7: The Effect of Dynastic Status on the Number of Candidates

	(1) 0%	(2) 10%	(3) 20%
Dynastic	−0.135*	−0.058	−0.068*
	(0.042)	(0.035)	(0.030)
Female	0.370*	0.068	−0.019
	(0.142)	(0.119)	(0.085)
Age	0.001	0.008*	0.004*
	(0.003)	(0.003)	(0.002)
Local politician	−0.081	−0.076*	−0.012
	(0.070)	(0.037)	(0.023)
LDP	−0.372*	−0.274*	−0.232*
	(0.112)	(0.084)	(0.052)
DPJ	−0.122	−0.128	−0.159*
	(0.129)	(0.090)	(0.050)
Komei	−0.535*	−0.005	−0.178*
	(0.143)	(0.140)	(0.078)
Incumbent	−0.206*	−0.056	−0.062*
	(0.051)	(0.042)	(0.027)
Term	0.001	−0.035*	−0.019*
	(0.013)	(0.012)	(0.006)
1996	0.888*	0.736*	0.119*
	(0.128)	(0.115)	(0.062)
2000	0.656*	0.515*	−0.026
	(0.096)	(0.083)	(0.042)
2003	0.081	−0.038	−0.076*
	(0.064)	(0.031)	(0.027)
Constant	3.751*	2.374*	2.240*
	(0.184)	(0.133)	(0.092)
R^2	0.291	0.429	0.156
N		1200	

Note: Table entries are linear regression coefficients with robust standard errors in parentheses. Standard errors are clustered by prefectures. Estimates are based on winners elected for the 1996, 2000, 2003, and 2005 Lower House elections. The dependent variables are the number of candidates running in a district. Column (1) includes the number of all candidates. Column (2) includes the number of candidates who received more than 10% of votes. Column (3) includes the number of candidates who received more than 20% of votes. Prefecture fixed effects are included in the models. $*$ p $<$ .05 (one-tailed tests).

Table 8: The Effect of Dynastic Status on Financial Resources

	(1) Asset	(2) Campaign Revenue
Dynastic	5.375*	1.701*
	(2.370)	(0.873)
Female	1.315	−3.635*
	(3.714)	(2.017)
Age	0.159	−0.022
	(0.105)	(0.041)
Local politician	−0.901	−0.515
	(1.178)	(0.673)
LDP	1.569	5.653*
	(1.283)	(1.727)
DPJ	1.874	2.957
	(1.928)	(1.854)
Incumbent	−0.377	0.676
	(1.460)	(0.812)
Term	0.666	0.199
	(0.535)	(0.169)
1996	1.830*	
	(1.053)	
2000	1.266	
	(1.094)	
2003	−0.766	
	(0.593)	
Constant	−10.570*	11.961*
	(4.716)	(1.948)
R^2	0.081	0.226
N	1198	297

Note: Table entries are linear regression coefficients with robust standard errors in parentheses. Standard errors are clustered by prefectures. Estimates are based on winners elected for the 1996, 2000, 2003, and 2005 Lower House elections. Estimates are based on winners elected for the 1996, 2000, 2003, and 2005 Lower House elections in Column (1) and in the 1996 election in Column (2). The dependent variable in Column (1) is the total asset in 1,000,000 yen, while the dependent variable in Column (2) is the total campaign revenue in 1,000,000 yen. Prefecture fixed effects are included in the models. $*$ p $<$ .05 (one-tailed tests).