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## POLITICAL DYNASTIES

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#### Abstract

We study political dynasties in the United States Congress since its inception in 1789. We document historic and geographic patterns in the evolution and profile of political dynasties, study the extent of dynastic bias in legislative politics versus other occupations, and analyze the connection between political dynasties and political competition. We also study the self-perpetuation of political elites. We find that legislators who enjoy longer tenures are significantly more likely to have relatives entering Congress later. Using instrumental variables methods, we establish that this relationship is causal: a longer period in power increases the chance that a person may start (or continue) a political dynasty. Therefore, dynastic political power is self-perpetuating in that a positive exogenous shock to a person's political power has persistent effects through posterior dynastic attainment. In politics, power begets power.

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## 1 Introduction

A recent article in The Economist complained that the last two US presidential elections have been dominated by descendants of former presidents or senators. President Bush is the son of a president and grandson of a senator, Mr. Gore is the son of a senator and the exception is John Kerry, who, according to the article, is "thanks to a rich wife, the richest senator in a Senate full of plutocrats. ${ }^{1}$ Political dynasties are present in other democracies as well, such as India, where the Gandhi dynasty has spanned three generations and produced four national leaders. The main concern with political dynasties as voiced in the popular press is that they are somehow un-democratic. ${ }^{2}$ Theorists of elites have had similar concerns. Michels (1999 [1911]), writing on "the iron law of oligarchy," stated that even in democratic organizations the leadership, once elected, would entrench itself in power, undermining the democratic principle of a level playing field. Writers like Pareto and Mosca saw a complex set of forces behind the persistence of elites. Mosca (1966 [1896], p.74) argued that "every class displays the tendency to become hereditary, in fact if not in law (our translation)." According to Mosca, even when political positions are open to all, a family tie to those already in power would confer various advantages. All three main theorists of elites, Mosca, Pareto, and Michels, thought that political elites are largely self-perpetuating (Putnam 1976, p.4). But the observation of persistent political elites does not necessarily indicate that any kind of self-perpetuation has taken place. Mosca himself considered (skeptically) the different argument that persistent inequalities in political attainment could reflect hereditary inequalities

[^0]in talent and drive. If traits such as talent run in families, this may yield persistent advantages to some families over others that are not due to their already occupying positions of authority. The question then arises: does the existence of political dynasties reveal that self-perpetuation operates in democratic politics (and therefore the classic theorists were right), or does it just reflect original differences in ability across families?

The main contribution of this paper is to show the existence of self-perpetuation, using the particular case of the Congress of the United States. We define self-perpetuation as a power-treatment effect, whereby holding political power for longer increases the probability that one's heirs attain political power in the future regardless of family characteristics. We start by showing that there is a significant correlation between the tenure length of a legislator and the probability of her relatives attaining congressional office in the future. However, this association could be driven by unobserved heterogeneity across families. Original dynasty traits (old money, genetic endowments, etc.) may explain both why a person had a long career and why her relatives gained legislative seats later on.

In order to prove that self-perpetuation is present, we need to establish a causal relationship between length in office and posterior dynastic success. For this we use two instrumental variables approaches. Our first approach uses a regression discontinuity design relying on the (presumably random) outcome of close elections as an instrument for tenure length (see Hahn, Todd and Van der Klaauw 2001, and Butler, Lee and Moretti 2004 for an application of regression discontinuity to elections). We find that legislators who barely won their first reelection have a significantly higher chance of having a relative entering Congress later in time than legislators who barely lost their first reelection. In the second approach we instrument for whether a legislator's first reelection attempt is successful using the reelection rate of fellow party Representatives in the same state and year. The second instrumental variables approach corroborates our findings. Overall, we find that holding legislative power for more than one term increases the likelihood that a politician will have a relative entering

Congress in the future by about $70 \%$. Therefore, in politics, power begets power.
A second contribution of the paper is to provide a historical description of political dynasties in the US Congress. This description highlights the type of society in which dynasties tend to thrive, and is also useful when assessing the possible channels through which political power is transmitted. We show that the percentage of dynastic legislators has significantly decreased over time (a "dynastic" legislator is one who belongs to a family that had previously placed a member in Congress). Dynastic legislators were significantly more prevalent in the South and in the Senate, consistent with the notion of the South displaying lower sociopolitical mobility and openness, and the Senate being a more exclusive body. While the regional difference disappeared after World War II, the difference across chambers remains. We also provide evidence suggesting that dynastic effects are stronger in politics than in other occupations. Finally, we find that dynastic legislators are less common in congressional delegations coming from states (and times) where there is more political competition. One possible explanation is that when a party safely controls a state, those in control of a party can afford to favor candidates to whom they are connected by family or social ties. Under more severe competition, party elites cannot afford strategies other than fielding the best possible candidates, regardless of family connections.

Our results shed some light on the channels through which the dynastic transmission of political power takes place. Because exogenous shocks to dynastic power have an effect on dynastic permanence, superior fixed traits (i.e., original endowments in terms of genes, for instance) cannot be the whole explanation for political dynasties in the US Congress. Cumulative factors that depend on previous power attainment must be at play, possibly through various channels. The descriptive part of the paper offers some guidance at assessing the likelihood of different possibilities. It could be that a longer tenure induces a public service vocation in some family members of a legislator. However, we find that dynastic politicians are less likely to have previous public office experience. Another possibility is
that a longer tenure allows a legislator to accumulate an asset that he then bequests-like financial or human capital, name recognition, or contacts. In this paper we do not attempt to disentangle these various channels. However, the fact that political competition is negatively correlated with the prevalence of dynastic politicians suggests that dynastic transmission of political power may be more related to superior contacts with party machines -for examplethan to features valued by voters, such as higher human capital.

Our finding that shocks to political power have persistent effects through posterior family attainment has multiple implications for our understanding of political dynamics. First, while the inheritance of political power is considered by many to be un-democratic, we find that existing democratic processes still allow for the de facto inheritance of political power. This inheritance is potentially troublesome for those concerned with the legitimacy of the process by which representation is achieved, regardless of any impact on policy. ${ }^{3}$ Second, granting political power to new social groups may entail a transfer of power to their descendants. As a result, institutions that extend political representation-even if temporarily-may have long-lasting effects and therefore be hard to reverse. This in turn offers an explanation for why democratization may work as a commitment device. Acemoglu and Robinson (2006a) explain the rise of democracy in Western nations relying on the key assumption that democratization yields a commitment to future redistribution. Self-perpetuation offers one justification for that crucial assumption by showing that changes in representation may be persistent. Lastly, political mistakes by confused electorates may impose costs that are more long-lasting than simply conferring office to a bad candidate (see Wolfers 2002 on how voters reelect lucky, but not necessarily talented, incumbents). More generally, and similar to work on political selection and incumbency advantage (discussed below), our paper contributes to the understanding of forces shaping the political class. This is important given recent evidence that the identity of political officials matters in terms of the policies they

[^1]implement. ${ }^{4}$
The next section discusses related literature. Section 3 contains our descriptive contribution. First we describe our data and document patterns in the evolution and profile of dynastic legislators. Then we compare dynastic effects in Congress to those in other occupations, and examine the connection between political competition and dynastic prevalence. Section 4 contains our analysis of self-perpetuation. First we present a simple framework that clarifies our definition of self-perpetuation and the challenges to its empirical identification. Then we present the empirical results. Section 5 concludes.

## 2 Related literature

Work on the link between family relations and political power is to our knowledge scarce. Camp (1982) documents that high percentages of Mexican political leaders between 1935 and 1980 belonged to politically established families. Clubok, Wilensky and Berghorn (1969) use biographical data of US legislators and look at the percentage of legislators belonging to politically connected families. They describe the evolution of that magnitude over time and across regions of the US until 1961, and argue that the observed decrease cannot simply be explained by population growth. In their view, the decrease reflects modernization. Brandes Crook and Hibbing (1997) look at the impact of the election mode of Senators on a number of dimensions, including the percentage of Senators coming from families that had placed a legislator before. Washington (2005) examines another connection between family and politics: she shows that US legislators who have relatively more daughters take more progressive stances on women issues. Our work is also related to recent advances on the theory and evidence of legislative careers (Diermeier, Keane and Merlo 2005, Merlo and

[^2]Mattozzi 2005, and Snyder and Padró i Miquel 2006) and the composition of the political class (Besley, Persson and Sturm 2005, Caselli and Morelli 2004, Dal Bó and Di Tella 2003, Dal Bó et al. 2006). Also related is a paper by Acemoglu and Robinson (2006b) who offer a model of the persistence of elite power through investments in political influence.

Our paper is related to the incumbency advantage literature in that we attempt to measure the effect of political attainment on future political prospects (see, among many others, Erikson 1971, Gelman and King 1990, Levitt and Wolfram 1997, and Ansolabehere, Snyder, and Stewart 2000). An important difference with the incumbency advantage literature is that we identify a spillover effect that is interpersonal rather than intrapersonal. As such, our work underscores the social network dimension, given by family ties, of the effects that current political selection has on the future political class. As most papers in the incumbency advantage literature, we focus on identifying the effect, and abstract from the interesting problem of its direct consequences (an exception is King and Gelman 1991 who specifically investigate the impact of incumbency advantage on political responsiveness and partisan bias).

Finally, our work is also related to a vast empirical literature measuring within family income correlations across generations (see for instance Solon 1999, and references therein), and to a vast literature in sociology that has measured intergenerational mobility across occupations and status levels (see Ganzeboom, Treiman, and Ultee 1991 for a survey). ${ }^{5}$ Our inquiry is analogous but focused on correlations in political power attainment within families (although our approach contains intragenerational effects as well). Dynastic selfperpetuation represents a way in which (political) inequality across families is reproduced over time. Although our results do not necessarily imply that the reproduction of political inequality contributes to the reproduction of economic inequality, our paper does expand the

[^3]study of the reproduction of inequality to a new dimension. Going beyond the measurement of correlations, we also show that shocks affecting the political power of a person will have a causal effect spilling over to family members (see Currie and Moretti 2003 for how education shocks have intergenerational spillover effects).

## 3 Data and description

### 3.1 Data sources and key variables

The data for this project come from multiple sources. First, the Congressional Biographical Database (ICPSR study 7803) contains data on every legislator from 1789 to 1996. This dataset contains basic biographical information such as year of birth, prior experience, and whether or not a legislator had relatives that were also in Congress. These data were checked against the Congressional Biographical Directory, which has detailed information on the family connections of legislators. Our dataset does not detail all of a legislator's family links, but the ICPSR study includes a selected family tie for each legislator. This information is captured in Table 1, which gives an idea of what type of connections are more frequent. We observe that almost $95 \%$ of the reported family relationships can be categorized as close.

We create two indicator variables to characterize political dynasties: Postrelatives and Prerelatives. The former is equal to one whenever a legislator has a relative entering Congress after he did, and zero otherwise. The latter is equal to one whenever a legislator had a relative enter Congress before he did, and zero otherwise. Even when these variables may be considered coarse, in the next subsection we show that their historical and geographic variation is intuitive. This suggests that our key variables do capture useful information. Approximately $8.7 \%$ of legislators had previous relatives in office (Prerelatives) and $8.5 \% \mathrm{had}$ relatives entering Congress later (Postrelatives) -see Table 2). Table 2 also shows that $65 \%$ of legislators stay in Congress for more than one term. A term for House Representatives is
one congress (two years), and three congresses (six years) for a Senator. The average tenure length (in congresses) is 3.73 . We now define two variables that will be used frequently: Longterm $_{i}$ is a dummy variable equal to one if legislator $i$ stayed in Congress for more than one term, and Total tenure is a variable recording the total number of congresses served by a legislator.

Table 3 displays information on notable congressional dynasties. The Breckinridge family is the 'largest' political dynasty in terms of both the number of members placed in Congress (17) and the total number of congresses served (72). Its presence in Congress spans the period from 1789 to 1978. Other notable families in Congress are associated to the names Aldrich, Frelinghuysen, Hiester, Kennedy and Lodge.

In order to instrument for tenure length in our study of self-perpetuation in Section 4, we merged the biographical data with data from the Candidate and Constituency Statistics of Elections in the United States (ICPSR study 7757). Since these two databases do not have common individual identifiers, we employed a complex merging procedure which is detailed in the appendix. For the universe of House elections we were able to match 28, 560 elections out of the possible 30,028 that occurred. ${ }^{6}$

In subsection 3.3 we use data from the General Social Survey (ICPSR study 4295) in order to compare dynastic effects across occupations.

Finally we merged in an additional data set that was used to construct the measure of political competition used in subsection 3.4. This dataset contains the party affiliations of members of state houses and senates from 1880 until 1994 and was merged by state and congressional term. ${ }^{7}$

[^4]
### 3.2 Historical evolution

We document the presence of political dynasties in Congress across time, regions, chambers of congress and the two main political parties. Consistently with Clubok, Wilensky and Berghorn (1969), we find that the proportion of legislators with relatives in Congress has significantly decreased over time (see Figure $1 A$ ). We also find that this is true for the proportion of legislators with previous and posterior relatives (see Figure $1 B$ and $1 C$ ). We refer to legislators who had a previous relative in congress as "dynastic legislators." As shown in Figure $1 B$ and Table 4 there has been a significant decrease over time in the presence of dynastic legislators: while $12 \%$ of legislators were dynastic between 1789 and 1858 , only $6 \%$ were dynastic after 1966.

There are regional differences in the presence of dynastic legislators. Dynastic legislators used to be more prevalent in the South than in the rest of the country. This difference is significant before the Civil War and between the end of Reconstruction and World War II (see Figure $2 A$ and first panel of Table 4). Contrary to the trends portrayed by Clubok, Wilensky and Berghorn (1969), we find that regional differences in the presence of dynastic legislators have disappeared over time. The first panel of Table 4 shows that regional differences in the presence of dynastic legislators are not significant after World War II. However, the differences across regions regarding the entrance to Congress of dynastic politicians only disappeared after the civil rights movement -see the second panel of Table 4. The contrast suggests that the immediate postwar years generated a substantial exit of senior dynastic politicians.

There are important differences across chambers of Congress. The Senate has a greater share of dynastic politicians than the House and this difference has not disappeared with time (see Figure $2 B$ and Table 4). Finally, dynastic legislators were significantly more prevalent in the Democratic party than in the Republican party until the end of Reconstruction, but Brian Gaines. It has been used in De Figueiredo (2003) and De Figueiredo and Vanden Bergh (2004).
there are no significant differences across parties since then (see Figure $2 C$ and Table 4). The higher dynastic component of the Democratic party in the 19th century disappears if one excludes Southern legislators.

### 3.3 Dynastic prevalence across occupations

Even when looking at legislators elected in the 1990s, we find that nearly $5 \%$ of legislators have previous legislators in the family, but one may ask whether dynasties are any more prevalent in politics than in other professions. While a full comparative study of the intergenerational transmission of occupations is beyond the scope of this paper, in this subsection we offer some evidence suggesting that dynastic prevalence among legislators is indeed high when compared to other occupations. ${ }^{8}$

Table 5 presents data for the years 1972-2004 from the General Social Surveys (ICPSR study 4295) corresponding to a selected group of occupations. Column (1) reports the percentage of respondents in each occupation whose father was in the same occupation. According to this data more than $12 \%$ of doctors have fathers who were doctors, while less than $2 \%$ of economists have fathers that were economists. But to compare the importance of dynastic effects across occupations one must control for the share of the population in each profession (i.e. the fact that economists are much less common than doctors). Column (2) reports the percentage of fathers in each occupation (note that, indeed, economists are a lot less common among fathers than doctors). Column (3) then reports the ratio of column (1) over column (2), which controls for the relative frequency of occupations among fathers. This ratio represents the odds that both son and father are in the same profession relative to the benchmark situation where the professions of respondents are independent from those

[^5]of their fathers. ${ }^{9}$ Notice that the adjusted dynastic prevalence index in column (3), or what we call 'dynastic bias,' is higher for economists than for doctors: although doctors have fathers who were doctors roughly six times more often than economists have fathers who were economists, doctors were roughly ten times more common among fathers, so dynastic effects appear to play a larger role in economics than in medicine. ${ }^{10}$

The last row contains data for legislators. Column (1) presents the percentage of legislators elected in the 1990s who had fathers who were legislators. In column (2) we report a conservative estimate of the percentage of fathers who were legislators. We explain in the appendix our calculations to estimate this figure. ${ }^{11}$ The dynastic bias is strongest for legislators relative to all other selected occupations. The dynastic bias is more than seven times stronger for legislators than for economists, the second most "dynastic" occupation in our group, and more than ten times stronger than for doctors, the third most dynastic profession in our sample. Even if we assumed that, among fathers, legislators were exactly as common as economists, we would obtain a dynastic bias that is almost twice as strong for legislators than for economists.

[^6]
### 3.4 Personal characteristics and political careers of dynastic politicians

In this section we study how the personal characteristics and the political careers of dynastic legislators differ from those of other legislators. We study the following characteristics. House is a dummy variable equal to one if the legislator entered through the House. Age of entry is the age of the legislator the year he/she entered Congress. Previous public experience is a dummy variable equal to one if the legislator had public experience at the time of entry to Congress. College degree is a dummy variable equal to one if the legislator had a college degree. Outsider is a dummy variable equal to one if the legislator was from a different state than the one he represents. Female is a dummy variable equal to one if the legislator is a woman.

Given the difference across regions and times in the number of dynastic politicians, simple comparisons of means of the previous variables may be misleading. It is necessary to control by year and state in which the legislator is observed. ${ }^{12}$ Table 6 shows OLS regression results of how legislator characteristics relate to having a previous relative in Congress, including state and year fixed effects. ${ }^{13}$ We find that dynastic politicians are less likely to start their career in the House, suggesting they have the ability or means to enter directly through the Senate, a much smaller and more prestigious body. This difference cannot be attributed to a later entry into Congress: dynastic legislators enter Congress at about 44 years of age, just like non-dynastic legislators. Dynastic legislators are not more likely to come from a state different than the one they represent and are significantly less likely to have previous public experience, although they are more likely to have a college degree. Moreover,

[^7]dynastic legislators with a college education are significantly more likely to have attended an Ivy League school than the rest of the college educated legislators (unreported in the table). It may be interesting to note that dynastic legislators are significantly more likely to be female than nondynastic ones. In other words, dynastic membership seems to have facilitated the difficult progress of female political representation. In addition, we find that dynastic legislators do not have longer careers in Congress. Table 7 shows that dynastic politicians are equally likely to stay in Congress for more than one term and have similar tenure lengths to those of other legislators.

### 3.5 Dynastic prevalence and political competition

In this section we study the connection between political competition and political dynasties. We find that increases in political competition are associated with fewer political dynasties, suggesting that political competition reduces the dynastic transmission of political power.

For this analysis we use a political competition index constructed upon party dominance of state legislatures between the years 1880 and 1996. This index has a minimum value of -0.5 when $100 \%$ of the seats in the state legislature in a given year belong to the same party. This index increases as the percentage of seats held by a majority party decreases. The maximum value of the index is zero, corresponding to the case when the total number of seats (including the two chambers) held by the two largest parties is split $50-50$ between these two parties. More formally, the political competition index for state $i$ and year $j$ is given by $P C_{i j}=-\left|\frac{L H D_{i j}+U H D_{i j}}{L H D_{i j}+U H D_{i j}+L H R_{i j}+U H R_{i j}}-0.5\right|$, where $L H D_{i j}\left(L H R_{i j}\right)$ and $U H D_{i j}$ ( $U H R_{i j}$ ) represent the number of seats that Democrats (Republicans) hold in the lower and upper chambers of the state legislature that was elected in year $j$. This measure of political competiton is superior to simply using the vote shares of national legislators which may depend on the characteristics of those legislators.

Figure 3 shows the (uncontrolled) association between political competition and the pro-
portion of legislators coming from families that had placed legislators before. This figure shows that as the index moves from -0.5 to 0 (i.e., as political competition increases) the percentage of politicians coming from politically established families decreases. Table 8 presents estimates of the association between the percentage of legislators who are elected to Congress in year $j$ in state $i$, and the political competition in the same state-year. The first two specifications, in columns (1) and (2) respectively, capture the political competition index through a quadratic polynomial and show that political competition is a significant predictor of the prevalence of dynastic politicians even after controlling for year and state effects.

In columns (3) and (4) we report estimates from a regression of the percentage of legislators with Prerelatives on a dummy variable that takes the value 1 when the political competition index takes a value in the upper half of its support (i.e., above -0.25 ). The omitted dummy is the one corresponding to the first, or less competitive, half of the support. These estimates suggest that moving from districts with less competition to districts with more competition lowers the prevalence of dynastic politicians in about two percentage points. In the specifications where we exclude observations lying within thirty years of the constitution of the state we eliminate a censoring problem, as states with no previous political elite will tend to have low levels of dynastic politicians. The specifications in columns (2) and (4) take care of that problem and the constant indicates that the proportion of dynastic politicians in the less competitive states is around $10 \%$. Thus, the reduction in dynastic prevalence brought about by an increase in competition that moves a state from the lower half to the upper half of the support amounts to almost $20 \%$ of the baseline proportion.

One possible explanation of our findings is that when a party safely controls a state, the state and national leadership of the party can afford to favor "elite" candidates with whom they are connected by family or social ties. Because these candidates may not always be the best, favoring them costs the party leadership some extra probability of not winning a
seat. In very safe states, this cost is negligible, however, while the private returns to favoring friends and family may be substantial. ${ }^{14}$ The party leadership at the state and national level can favor particular legislative candidates is various ways, such as by directing resources to those candidates at the primary campaign stage. Under more severe competition, the party leadership may not be able to afford any strategy other than fielding the best possible candidates, regardless of their family connections. Doing otherwise may cost the party too much in terms of a larger likelihood of losing seats in Congress, which damages the party's power both at the state and national level. In other words, dynastic prevalence may reflect the prevalence of lower quality politicians due to constraints on political competition (this is compatible with the results and explanation of Besley, Persson and Sturm 2005, who study how political competition relates to the quality of governors in the United States).

## 4 Self-perpetuation

Mosca (1966 [1896]) observed that even representative regimes would comprise a tension between a "democratic tendency" and an "aristocratic tendency." Representative systems, while eliminating the legal inheritability of political rights, could be vulnerable to the emergence of de facto nobilities. This observation speaks squarely to the concern that is often voiced by the media in connection with the prevalence of political dynasties in the United States. Mosca saw the aristocratic tendency associated with the persistence of political elites as the result of various factors, including personal contacts, notoriety, and insider information-which helped well connected individuals in their rise to power. But such persistent inequality in political attainment across families may also follow from differences in talent and drive that run in families. Therefore, substantiating the idea that representative

[^8]systems embody an aristocratic tendency that is a result of previous access to power requires showing that the persistence of elites is not wholly due to heterogeneity across dynasties. In other words, we need to show that self-perpetuation effects are present.

### 4.1 Self-perpetuation: definition and main estimation challenges

We define self-perpetuation as a power-treatment effect, whereby holding political power increases the probability that one's heirs attain political power in the future regardless of dynastic characteristics. In other words, political self-perpetuation means that power begets power.

We now present a simple model that clarifies the nature of the self-perpetuation effect and highlights challenges in its empirical identification.

Assume that the amount of political power $y_{i}$ enjoyed by citizen $i$ depends on the amount of political capital $k_{i}$ available to him,

$$
y_{i}=\alpha+\beta k_{i}+v_{i},
$$

where $\beta$ is a positive scalar and $v_{i}$ is a random shock. Political capital is defined as any personal characteristic that has an effect on political attainment, from human capital to name recognition. Citizen $i$ has a successor, whose amount of political power is determined as follows,

$$
y_{i}^{s}=\alpha+\beta k_{i}^{s}+v_{i}^{s},
$$

where $k_{i}^{s}$ is the political capital of the succesor and $v_{i}^{s}$ is an independent shock affecting the successor. We assume that the political capital of the successor depends on the political capital $k_{i}$ and the political power $y_{i}$ of her predecessor. In particular, the process of political capital is,

$$
k_{i}^{s}=\delta k_{i}+\gamma y
$$

where $\delta$ and $\gamma$ are scalars. From the previous two equations we find the relationship between the political power of the successors and the political capital and attainment of predecessors,

$$
\begin{equation*}
y_{i}^{s}=\alpha+\beta \delta k_{i}+\beta \gamma y_{i}+v_{i}^{s} . \tag{1}
\end{equation*}
$$

The last equation says that the political attainment of a successor depends on the political capital of her predecessor, and the contribution to her own political capital made by her predecessors' political power $y_{i}$. In this simple world, our hypothesis that political elites are self-perpetuating would be true whenever $\gamma>0$, indicating that the political capital of a successor, and hence her political power attainment, is augmented by her predecessor's power. This is the precise sense in which self-perpetuation implies that power begets power. Even if $\gamma=0$, it might still be true that in some dynasty both the predecessor and the successor have high levels of political attainment $y_{i}$ and $y_{i}^{s}$ due to a high level of original political capital $k_{i}$. The last equation then clarifies the distinction between the idea that persistence in dynastic political attainment reflects inheritable heterogeneity in dynasty types $(\delta>0)$ from our hypothesis of self-perpetuation $(\gamma>0)$.

The possibility that different families may have different and unobserved amounts of political capital poses a problem when attempting to test the idea of self-perpetuation. A researcher intending to estimate whether power begets power may run the following, naive, regression,

$$
\begin{equation*}
y_{i}^{s}=a_{1}+a_{2} y_{i}+u_{i}, \tag{2}
\end{equation*}
$$

where $u_{i}$ is the error term. The researcher may interpret a positive estimate of $a_{2}$ as evidence of self-perpetuation $(\gamma>0)$. However the estimation of the effect of $y_{i}$ on $y_{i}^{s}$ will be biased given the omitted variable $k_{i}$, the political capital of the predecessor. To better understand what an OLS estimate of $a_{2}$ would reflect, we can write $k_{i}=\frac{y_{i}-\alpha-v_{i}}{\beta}$, and therefore, using
(1) we get,

$$
y_{i}^{s}=\alpha(1-\delta)+(\delta+\beta \gamma) y_{i}-\beta v_{i}+v_{i}^{s}
$$

which indicates that the naive regression would yield an estimate of $a_{2}=\delta+\beta \gamma$. It follows that even if there is no cumulative effect of power on political capital (i.e., $\gamma=0$ ) we would obtain $a_{2}=\delta>0$ due to the fact that the predecessor's political capital $k_{i}$ that affects power attainment is inheritable $(\delta>0)$. Thus, our estimation strategy needs to control for characteristics of the predecessor that may affect the power attainment of both predecessors and successors.

Note that self-perpetuation $(\gamma>0)$ affects the forces behind the formation of the political class. We can write the political attainment of successors as,

$$
\begin{align*}
y_{i}^{s} & =\alpha+\beta \delta k_{i}+\beta \gamma\left[\alpha+\beta k_{i}+v_{i}\right]+v_{i}^{s}  \tag{3}\\
& =\alpha(1+\beta \gamma)+\beta(\delta+\beta \gamma) k_{i}+\beta \gamma v_{i}+v_{i}^{s} \tag{4}
\end{align*}
$$

This last expression reveals that when power augments political capital $(\gamma>0)$ the political power of successors is enhanced through three channels: first, by enhancing the effect of the constant that affects power through the term $\alpha(1+\beta \gamma)$; second, by enhancing the effect of the predecessor's political capital through the term $\beta(\delta+\beta \gamma) k_{i}$; and third, by capitalizing on the good luck of predecessors through the term $\beta \gamma v_{i}$. A positive estimate of $\gamma$ would provide evidence that holding political power reinforces the effects of other sources of elite persistence such as differing dynastic traits, and that past luck matters for the future distribution of power.

### 4.2 Self-perpetuation: OLS estimates

Because of data limitations, we focus not on the universe of citizens but on the universe of politicians who served in the US Congress. The variation in legislators' political power
is measured by their tenure length since it is typically argued that tenure in congressional office is associated with more political power (more senior legislators develop more name recognition, become more deeply embedded in party networks, and obtain more influential committee positions). We construct measures of political power by seeing whether the legislator was reelected at least once and by counting the number of total congresses served (through, respectively, our variables Longterm $_{i}$ and Total tenure ${ }_{i}$, both introduced in the descriptive section of our paper). As a measure of the political power of the succesors we consider whether the legislator has relatives attaining congressional office in the future at all. ${ }^{15}$ This is captured by the the variable Postrelatives, which we also introduced in the descriptive section of the paper.

In this section we study the relationship between tenure in Congress and the probability of having relatives in Congress in the future by estimating the following OLS regression:

$$
\text { Postrelative }_{i}=a_{1}+a_{2} \text { Longterm }_{i}+a_{3} X_{i}+b_{s}+b_{y}+\varepsilon_{i} .
$$

Recall that Postrelative $_{i}$ is a dummy variable equal to one if legislator $i$ has a relative in Congress in the future, and as said before, Longterm $_{i}$ is a dummy variable equal to one if legislator $i$ stayed in Congress for more than one term, and $X_{i}$ is a vector of legislator $i$ 's personal characteristics. The coefficients $b_{s}$ and $b_{y}$ are state and year fixed effects that are used in certain specifications. The symbol $\varepsilon_{i}$ represents the error term. ${ }^{16}$ As explained in the previous section, $a_{2}$ is likely to be a biased estimate of $\gamma$, but the reporting of OLS estimates is useful to establish whether there is at least the potential for self-perpetuation

[^9]to be present. A coefficient $a_{2}$ that is not significantly larger than zero would make selfperpetuation unlikely.

Table 9 column (1) shows that $7.1 \%$ of the legislators that were in Congress for only one term had a relative entering Congress after them while that percentage increases to $9.3 \%$ if the legislator stayed in office for more than one term; the difference is significant at the $1 \%$ level. Columns (2) and (3) show a similar comparison when we eliminate people born after 1910 and those who died in office. We eliminate people born after 1910 so as to account for the censoring that occurs because legislators at the end of the sample period have less time to establish dynasties. We omit individuals who died in office to ensure that our results are not driven by the convention that when an individual dies in office a relative might step in to take his place. The coefficient estimates remain largely unchanged and are statistically equivalent.

Column (4) reports a regression controlling for state and year fixed effects. The fixed effects do not change the results markedly. When further controls are added in column (5) the estimate of $a_{2}$ does not change. This suggests that omitted variables are unlikely to bias upwards our estimate of the effect of tenure on having relatives in future congresses.

Other personal characteristics correlate with having relatives in future congresses. Legislators with Prerelatives are $16 \%$ more likely to have Postrelatives. Senators and legislators whose chamber of entry was the House but eventually moved to the Senate have a $5 \%$ and $6.8 \%$ higher probability, respectively, of having a relative entering Congress relative to legislators who were only members of the House. These findings suggest that more successful career patterns (politicians who are always Senators or who start as Representatives but eventually ascend to the Senate) are associated with a higher likelihood of starting or continuing a dynasty. One potential problem with the specification used so far is that the error terms of legislators belonging to the same family may not be independent, affecting the standard errors. To address this issue we report in column (6) estimates with only one
observation per family (we eliminate all legislators who have themselves previous relatives in office). The results are unchanged.

We obtain similar results if we use the total number of congresses served, total tenure, as a measure of political power. Figure 4 shows the proportion of legislators with Postrelatives by the number of terms they served. There is a clear positive relationship between total tenure and Postrelatives with the impact of terms decreasing with the number of terms served. Table 10 presents the regression estimates, which are similar to those in Table 9. Starting in column (6) we also run the results using a quadratic term of total tenure. The quadratic term is negative and significantly different from zero, reflecting the fact that there are decreasing marginal returns to tenure in terms of future relatives in office. The marginal impact on the probability of a relative entering Congress in the future of going from one term to two terms is between $1.3 \%$ and $3 \%$.

Overall, the OLS results yield evidence consistent with self-perpetuation. However, as argued before, the fact that legislators with longer tenures are more likely to have relatives in future congresses could be due to unobserved family characteristics such as their political capital. In the following two subsections we employ two strategies to determine whether tenure in office has a causal impact on the probability that a legislator's relative will enter Congress in the future. First, we focus on House Representatives that attempted a reelection and compare those that barely won their first reelection with those that barely lost, that is, we use a regression discontinuity approach. Second, we use the re-election rates of a legislator's cohort as an instrument for a legislator's re-election.

### 4.3 Establishing a causal link: Close elections

To identify the causal impact of tenure we start by using a very simple approach that relies on a comparison between legislators who barely won their first reelection with those who barely lost. The identifying assumption in this regression discontinuity analysis is that close
elections provide a random assignment of legislators across the categories of winners and losers, instead of being driven by family characteristics. This assumption could be criticized if elections were rigged such that winning could depend on personal characteristics that are also correlated with having Postrelatives. Snyder (2005) finds evidence consistent with the idea that the vote counting process is biased in favor of long-time incumbents in the U.S. House. However, there is no evidence of such manipulation taking place in first re-election attempts, which is the focus of this study. It could also be argued that legislators with relatives previously in Congress may be more able to rig election tallies. To eliminate this possibility we focus on legislators without Prerelatives for the rest of this section. We also exclude legislators who died in office or were born after 1910 as in the previous section.

Table 11 shows the percentage of Congress members with Postrelatives conditional on the results of the first reelection attempt (barely lost vs. barely won). Of the legislators that lost by less than a $2.5 \%$ margin of the vote, $2.8 \%$ have Postrelatives in Congress. Instead, of those that won by up to a $2.5 \%$ margin, $7.12 \%$ have Postrelatives in Congress. A similar increase is observed for the $5 \%$ window and both differences are statistically significant ( p -values of 0.024 and 0.01 respectively).

We argue that in such a small window winners and losers are identical so that any difference in Postrelatives should be attributed to the different outcome in the first reelection and not to personal or family characteristics. The data support this assumption. As Table 11 shows, at the $2.5 \%$ and $5 \%$ windows, only one characteristic out of eleven is significantly different at the $10 \%$ level between winners and losers. This suggests that it is not an unobserved family characteristic that causes both long tenures and Postrelatives for legislators winning close reelections, but that staying in power for longer increases the probability of forming a dynasty.

However, the previous analysis fails to consider that not all losers of a first reelection were one-term legislators: some ran again and reentered Congress after losing their first reelection
attempt. Therefore, the differences in Table 11 underestimate the effect of being a long term legislator on the chance of having relatives in Congress later in time. To solve this problem we implement an IV regression in which we estimate the probability of serving more than one term in Congress as a function of the first reelection outcome in the first stage. In a second stage, we estimate the effect of Longterm on Postrelative using the predicted value of Longterm from the first stage.

We estimate the following equation in the first stage:

$$
\text { Longterm }_{i}=b_{1}+b_{2} W_{i}+b_{3} X_{i}\left(1-W_{i}\right)+b_{r}\left(1-W_{i}\right)+b_{d}\left(1-W_{i}\right)+\varepsilon_{i}
$$

where $\operatorname{Longterm}_{i}$ is an indicator equal to one if legislator $i$ was in Congress for more than one term, $W_{i}$ is an indicator equal to one if the legislator won his first reelection attempt and $X_{i}$ is a vector of personal characteristics. The coefficients $b_{r}$ and $b_{d}$ are region and decade fixed effects. All controls including the region and decade fixed effects are interacted with losing. This is done to adjust for the fact that all winners of the first reelection attempt had long term careers, but not all losers had short term careers; in other words, controls are used to explain variation across losers. ${ }^{17}$ The default decade is the 1880 s and the default region is the North-East (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Delaware, New Jersey, New York and Pennsylvania). The coefficient on $W_{i}$ measures the average impact of winning on the probability of being a long term legislator conditional on region and decade effects.

Table 12 shows the estimated coefficients for the first stage. Winning the first reelection and its interactions are a good predictor of staying in Congress for more than one term at the $2.5 \%$ and $5 \%$ windows, after controlling for various legislator characteristics. The explanatory variables of the first stages are jointly significant with F statistics always greater than 60 .

[^10]The instruments are strong.
The equation we estimate in the second stage is as follows:

$$
\text { Postrelative }_{i}=a_{1}+a_{2} \text { Longter }_{i}+a_{3} X_{i}+a_{r}+a_{d}+\varepsilon_{i}
$$

where Longterm $_{i}$ is the estimated probability of having more than one term in office as predicted by the first stage. In these regressions we use region and decade fixed effects in order to minimize problems with statistical power. We do however incorporate state and year fixed effects in subsequent specifications with more observations.

Table 13 shows the estimated coefficients for the second stage. Being in Congress for more than one term has a significant effect on the probability of having a Postrelative in Congress. This is the case for both the $2.5 \%$ and $5 \%$ margin of votes windows and whether or not we control for observable characteristics or we include legislators with Prerelatives. The magnitude of the effect ranges from $3.1 \%$ to $5.2 \%$.

We obtain similar results if we use the total number of terms served and its square. In the first stage we estimate the following equations:

Totaltenure $_{i}=b_{1}+b_{2} W_{i}+b_{3} X_{i}+b_{4} X_{i}\left(1-W_{i}\right)+b_{r}+b_{d}+c_{r}\left(1-W_{i}\right)+c_{d}\left(1-W_{i}\right)+\varepsilon_{i}$, Totaltenure $e_{i}^{2}=b_{1}^{\prime}+b_{2}^{\prime} W_{i}+b_{3}^{\prime} X_{i}+b_{4}^{\prime} X_{i}\left(1-W_{i}\right)+b_{r}+b_{d}+c_{r}^{\prime}\left(1-W_{i}\right)+c_{d}^{\prime}\left(1-W_{i}\right)+\varepsilon_{i}$,
where Totaltenure ${ }_{i}^{2}$ is the square of Totaltenure $i_{i}$. We present the estimates from the first stage in Table 14. The explanatory variables of the first stages are jointly significant with F statistics always greater than 20. Again, the instruments are strong.

In the second stage we estimate the following equation:

$$
\text { Postrelative }_{i}=a_{1}+a_{2} \text { Totalten }_{\text {ur }}^{i}+a_{2}^{\prime} \text { Totaltenure }^{2}{ }_{i}+a_{3} X_{i}+a_{r}+a_{d}+\varepsilon_{i} .
$$

Table 15 shows the estimated coefficients from the second stage. The linear effect of an extra term in power on the probability of having a Postrelative ranges from $3.9 \%$ to $6.3 \%$. The marginal effect of a second term in power (denoted as TE(2-1) in Table 15) is positive, ranging from $2.8 \%$ to $4.2 \%$, and always significant at the $10 \%$ level.

The results presented this far are based on legislators within a small window of victory or defeat in their first reelection (vote margins of $2.5 \%$ or $5 \%$ ). We next include more legislators (within $25 \%$ margin of victory or defeat). ${ }^{18}$ This sample includes legislators that won or lost by large margins and therefore the reelection outcome cannot be thought to be random. We then control for the direct effect that the margin of votes may have on whether a legislator has Postrelatives by including a high order polynomial in the margin of votes. In other words, we apply the global polynomial estimation technique developed by Hahn, Todd and Van der Klaauw (2001) (see also Van der Klaauw 2002).

Figure 5 shows the proportion of legislators with Postrelatives in Congress depending on the margin of votes by which they won or lost their first reelection attempt. The figure also shows the estimated quartic polynomial on vote margin with a $95 \%$ confidence interval allowing for a discontinuity at the $0 \%$ margin of votes. There is a clear discontinuity at that value: winners are more likely to have relatives coming into Congress later on even when the polynomial is absorbing any direct effect that the margin of votes (or the variables that cause it) may have on Postrelatives.

However, Figure 5 fails to control for other observable characteristics and the fact that not all losers had only one term in office. To solve this problem we utilize, as before, the result from the first reelection to estimate the probability of being a long term legislator. Figure 6 shows the relationship of Longterm and Total tenure with the margin of votes that legislators obtain in their first reelection attempt. The figure also shows the estimated

[^11]quartic polynomial with a $95 \%$ confidence interval. There is a clear discontinuity at $0 \%$ : winners go on to have a longer tenure than losers. Thus, we can use the result from the first reelection attempt as an instrument for tenure and be able to identify the effect of tenure on Postrelatives as before.

The equation we estimate in the first stage is as follows:

Longterm $_{i}=b_{1}+b_{2} W_{i}+b_{3} X_{i}\left(1-W_{i}\right)+\sum_{s=1} q_{s}$ Marginvote $^{s}\left(1-W_{i}\right)+b_{r}\left(1-W_{i}\right)+b_{d}\left(1-W_{i}\right)+\varepsilon_{i}$,
where the $q^{\prime} s$ are coefficients in the vote margin polynomial (set to a quartic).
Table 16 shows the estimated coefficients. Win predicts becoming a long term legislator in the $25 \%$ window when controlling for the margin of votes. This is robust to including state and year fixed effects, legislators with Prerelatives and larger margin of vote windows. Again, the F statistics for joint significance are large.

In the second stage we estimate the following equation:

$$
\text { Postrelative }_{i}=a_{1}+a_{2} \text { Longterm }_{i}+a_{3} X_{i}+\sum_{s=1} t_{s} \text { Marginvote }^{s}+a_{r}+a_{d}+\varepsilon_{i},
$$

where the $t^{\prime} s$ are coefficients in the (quartic) vote margin polynomial.
The second stage results in Table 17 show a clear positive effect of Longterm on Postrelatives. In the $25 \%$ window, Longterm is significant with a magnitude ranging from $4.7 \%$ to $6.6 \%$. In the $40 \%$ window the effect of Longterm is also significant and with similar magnitude.

These results are robust to considering Total tenure instead of Longterm -see tables 18 and 19. The linear effect of an extra term in power on the probability of having a Postrelative ranges from $2.2 \%$ to $4.9 \%$. The marginal effect of a second term in the House is positive, ranging from $1.6 \%$ to $3.7 \%$, and always significant.

These results suggest that the longer one's tenure, the more likely one is to establish
a political dynasty, and that this relationship is causal. The identifying assumption in our analysis is that close elections provide a random assignment of legislators across the categories of winners and losers. We provided evidence of this for small windows in Table 11. To provide further evidence in support of this assumption, we estimate the relationship between tenure and all personal characteristics using the regression discontinuity design. The estimated model always includes a quartic polynomial on vote margin. ${ }^{19}$ We present the estimates in Table 20 with region and decade fixed effects. First, we find that the estimates of the impact of Longterm on Postrelatives are robust to considering large windows (in small windows the coefficients remain high but the much higher standard errors damage significance). Second, for some windows one out of nine observables appears unbalanced. However, such imbalances are not robust to using larger windows. Another robustness check is to introduce state and year fixed effects (instead of region and decade fixed effects). When we do this (unreported) we find that while the effect of Longterm on Postrelative continues to be significant for most vote margin windows with many observations, the imbalances in predetermined observables disappear almost completely. Overall, the effect of a long term career on having posterior relatives in office appears fairly robust and not the result of noisy data in a particular vote margin window. On the contrary, the imbalances in the other observables of our sample are few and not robust. ${ }^{20}$

[^12]
### 4.4 Establishing a causal link: Using the reelection rates of a legislator's cohort

In this section we implement an alternative instrumental variables strategy to estimate the causal effect of congressional tenure on having a relative attaining legislative office. We use the reelection probabilities of any given legislator's current cohort, by state and party, as an instrument for his reelection probabilities. ${ }^{21}$ For example, consider a House member going for his first reelection in California in the year 1892. The instrument for this legislator's first reelection is the reelection rate of legislators of the same party in California in the year 1892. The idea is that there is an underlying common shock to all of the individuals in this cohort that is independent of the characteristics of the individual attempting to get reelected. We use this common shock as a source of exogenous variation in congressional tenure to identify the impact of tenure on having relatives follow into office. In our preferred specification we include fixed effects by state-decade combinations, so we identify the reelection shock relative to a given state-decade. ${ }^{22}$ In the example of the legislator from California in 1892, we would only compare the shock in California in 1892 to other shocks in California in the 1890's.

The identifying assumption is that the current electoral shocks to an individual's cohort will affect his probability of having a relative coming into office only through the channel of whether the legislator stays in office or not.

We use the following formula to construct the instrument for legislator $i$ within a state/year/party with a cohort of size $N$ :

$$
\text { Electinstrument }_{i}=\frac{\left[\sum_{j=1}^{N}\left(\text { reelect }_{j}\right)\right]-\left(\text { reelect }_{i}\right)}{N-1}
$$

where reelect $_{j}$ is a dummy variable equal to one if $j$, in the same state/year/party, was

[^13]reelected. This formula gives the probability of an individual in the cohort being reelected. ${ }^{23}$ In our preferred specification, we estimate the first stage equation:
$$
\text { Longterm }_{i}=b_{1}+b_{2} \text { Electinstrument }_{i}+b_{3} X_{i}+b_{s d}+\varepsilon_{i},
$$
where $b_{s d}$ captures state-decade fixed effects. Thus we obtain the impact of the instrument on Longterm only within a given state-decade group. In general the first stage is quite strong (Table 21). We find a highly significant impact of the reelection instrument on Longterm. We then proceed to estimate the second stage equation with the instrumented Longterm:
$$
\text { Postrelative }_{i}=a_{1}+a_{2} \text { Longter }_{i}+a_{3} X_{i}+a_{s d}+\varepsilon_{i} .
$$

We include the state-decade effects to restrict identifying variation to that in small regiontime groups. Table 22 presents the second stage estimates. Across all of the specifications we find that the estimate of Longterm is largely consistent with estimates from the regression discontinuity design approach. In column (1) we use state-quarter of the century effects while in column (2) we use our preferred specification with state-decade effects. We find that in both specifications the results are positive, significant, and of the same order of magnitude as our previous regression discontinuity estimates. However somewhat surprisingly in column (3) we find that when we exclude individuals with previous relatives the results become weaker and the estimate becomes insignificant. This stands in contrast to our previous regression discontinuity specification. However we cannot refute that any of the estimates differ within Table 22 or across the different approaches. Column (4) reports our overall preferred specification, which excludes individuals whose Postrelatives entered within ten years of the first individual's first reelection. This exclusion attempts to rule out cases where the shock to a legislator's reelection could have a direct effect on the entry of a posterior

[^14]relative through a channel other than the legislator's tenure. For example, if shocks are serially correlated, it could be that a high rate of reelections for Democrats in California in 1892 is associated with more power accruing to Democrats in general in the immediate years. Therefore, the Postrelative of a Democratic legislator, being likely to be a Democrat in California himself, may be more likely to attain power soon afterwards. Given our use of state-decade effects, when we focus on relatives that enter more than a decade after the first reelection attempt occurred, we sever that potential channel. The result in column (4) is significant at the $5 \%$. Finally in column (5) we exclude legislators with previous relatives and exclude entry of posterior relatives within ten years and find a weaker, though significant result. Taken together, these results are consistent with those obtained from the regression discontinuity approach.

## 5 Conclusion

We document patterns in the evolution and profile of political dynasties in the Congress of the United States since its inception in 1789, and provide some evidence that dynastic effects are stronger for legislators than for other occupations. We also show that dynastic legislators are less common under greater political competition. The basic emerging picture is that dynastic politicians are more prevalent in less open, mobile, and competitive societies, as well as in the Senate, the more exclusive of the two congressional chambers. We then explore the dynastic transmission of political power with a focus on the presence of selfperpetuation. A simple model helps us distinguish between self-perpetuation and other sources of elite persistence, such as persistent heterogeneity in dynastic traits. We show that the tenure length of legislators is correlated with the probability of their having a relative entering Congress in the future. While this correlation could be due to unobserved family characteristics, two different IV strategies allow us to determine that there is an important
causal component: having a long tenure in Congress increases significantly the probability of establishing a dynasty (the effect is around $70 \%$ of the baseline probability). Put differently, shocks to political power have persistent effects. An implication is that the political class is partly shaped by the luck of previous politicians, and that holding political power reinforces the effects of other potential sources of elite persistence such as differing dynastic traits.

Our results shed some light on the channels through which the dynastic transmission of political power takes place. First, the fact that there is a causal relationship between tenure length and the probability of starting or continuing a dynasty shows that superior original endowments (in terms of genes, for instance) cannot fully explain the observed political dynasties. Second, the fact that dynastic politicians are less likely to have previous public office experience suggests that dynastic politicians may not be characterized by a stronger vocation for public service. This is contrary to the idea that relatives of successful politicians may develop a vocation for public service. Finally, the fact that more political competition is associated with less dynastic politicians suggests that dynastic transmission may be more related to advantages such as superior contacts with party machines than to features valued by voters, such as experience or superior human capital. These findings lay out a interesting agenda for future research, namely undertaking a full analysis of the various mechanisms driving the dynastic transmission of political power.

## 6 Appendix

### 6.1 Merging

We merged the biographical dataset and the Candidate and Constituency Statistics of Elections in the United States, 1788-1990 (ICPSR study 7757) by matching each candidate/Congressional term observation in the Biographical Database with the subsequent reelection attempt from the elections data. For example when Newton Gingrich served in the 96th Congress we would attempt to merge that observation with a reelection attempt to enter into the 97 th Congress. Unfortunately the data from the elections database is not comprehensive and many elections are missing. Additionally merging between the Congressional Biographical database and the elections database is complicated by the fact that they only common identifiers between both data sets are the year, state, and names of the candidates. After removing elections where there are multiple winners ${ }^{24}$ and elections where no names were associated with the candidates ${ }^{25}$ we are left with 30,028 house elections. ${ }^{26}$ This stands in contrast with the 34,271 House member/Congress observations in the Biographical Database.

To merge the data sets we employed a multi-stage merging procedure. We first merged on state/Congressional term/last name and kept all of the merges that were unique. For the remaining unmerged observations we then merged on state/Congressional term/last name/first letter of first name ${ }^{27}$ and kept all of the unique merges. Finally we iterated the same process for state/Congress/last name/first and second letter of the first name. At this point the

[^15]merging yield a mere 55 unique matches. After these merges we were able to match 23,016 observations from the elections database and the biographical database. Beyond the fact that many elections were not recorded, this gap can be substantially attributed to the fact that many candidates decided not to run for reelection, which would make a merge impossible since they would not show up in the elections data set. For instance had Newton Gingrich decided to retire after serving in the 96th Congress no entry would appear in the elections database. Not surprisingly, the data that failed to merge disproportionately comes from the earlier years where recording was markedly more sporadic.

To further assess the efficacy of the merge, we merged the data again, but by matching the Biographical data with the election prior to entry. For example when Newton Gingrich served in the 96th Congress we would attempt to merge that observation with the election in 1978 to enter into the 96th Congress. Despite the fact that this is not the type of merge that we use in the paper, it is informative since it will enable us to conduct a diagnostic of whether there are systematic biases in the sample..$^{28}$ When conducting the merge in this manner we were able match 28,560 elections out of the possible 30,028 . To analyze whether our sample is systematically biased we regress the probability that there is a successful merge on a large set of legislator characteristics as well as fixed effects for each state and decade (i.e. a California 1890 fixed effect). In the unreported analysis we find suggestive evidence that there is little systematic bias in the sample, with some notable exceptions. We find that elections where women won are $7 \%$ less likely to be matched to results. Individuals who go onto to further civic service are also $1.5 \%$ less likely to be matched to election results. However important variables such as whether an individual has family members in Congress do not appear to be systematically biased in the sample, conditioning on the state-decade fixed effect. As

[^16]mentioned above, while merges are markedly more successful in later years, conditional on the year we do not see systematic differences in most of the variables of interest, which suggests that data omission is essentially random. These merge considerations only apply to the analysis in Section 4.4 where we use the elections data as an instrument.

### 6.2 Calculations for subsection 3.3

Because the General Social Survey does not report information on legislators, the row for legislators in Table 5 follows calculations by the authors that exploit census information and biographical data on legislators. Our objective was to do the calculation in the most conservative manner possible, in order to estimate a lower bound for the dynastic prevalence of legislators. While the information for the other professions comes from the period 19722004, we only considered legislators elected in the 1990s, the last decade of our biographical sample, which is conservative given that the trends of dynastic prevalence in Congress are decreasing. The main challenge then lied in estimating how common legislators could have been (as a proportion of total population) among the generation that spawned the modern generation of professionals. This requires estimating both the population size of the generation of fathers, and the number of legislators within that generation. A conservative calculation would be one that tends to underestimate the heritability of the legislative profession by overestimating how common legislators were in the generation of fathers. A simple approach to determine how common legislators are among the fathers in an age cohort is to see how many legislators belong to a typical class, and then determine the number of fathers in that class. A conservative calculation should then overestimate the number of legislators and underestimate the number of fathers. To do this we identified the class that placed the highest number of legislators. That is the class of 1840 , which placed 94 legislators. We then estimate the number of fathers in a cohort that could have spawned the legislators of the 1990s, and to err on the side of underestimating that number we take the population size
of 1900 (earlier than when the 1990s legislators were conceived). In particular, we took the number of males in fertile ages (20 to 44 years of age) in 1900 ( $1,993,708$ people), and then took only the percentage of them that would have become fathers. To do this we used the $47 \%$ paternity rate reported in the 2002 Survey of Family Growth in the United States. This is conservative given that paternity rates tend to be lower in modern days. This method yields that $0.01 \%$ of fathers were legislators.

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Table 1: Sample of the major types of family relationships

|  | Relationship | Count | Percent |
| :--- | :---: | :---: | :---: | Cumulative |  | 267 | 16.29 | 16.29 |
| :--- | :---: | :---: | :---: |
| Parent | 398 | 24.28 | 40.57 |
| Child | 45 | 2.75 | 43.32 |
| Grandparent | 81 | 4.94 | 48.26 |
| Grandchild | 101 | 6.16 | 54.42 |
| Uncle / Aunt | 149 | 9.09 | 63.51 |
| Nephew / Niece | 293 | 17.88 | 81.39 |
| Brother / Sister | 148 | 9.03 | 90.42 |
| Cousin | 34 | 2.07 | 92.5 |
| Husband | 32 | 1.95 | 94.45 |
| Wife or Widow | 90 | 5.55 | 100 |
| Other | 1,639 | 100 |  |

Note: Our ICPSR datase does not include all family links among legislators but reports a selected link for each. Thus, this table is indicative of the major types of family ties present in Congress although it cannot be taken to represent the universe of ties.

Table 2: Summary statistics—all data

| Variable | Obs | Mean | Std. Dev. | Min | Max |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Previous relative in office | 11455 | 0.087 | 0.28 | 0 | 1 |
| Posterior relative in office | 11455 | 0.085 | 0.28 | 0 | 1 |
| Long term | 11455 | 0.651 | 0.48 | 0 | 1 |
| Total tenure | 11455 | 3.73 | 3.54 | 1 | 29 |
| Age at death | 10205 | 69.98 | 12.78 | 27 | 103 |
| Age at entry | 11455 | 43.87 | 9.25 | 21 | 86 |
| Previous public office | 11455 | 0.806 | 0.40 | 0 | 1 |
| College degree | 11455 | 0.651 | 0.48 | 0 | 1 |
| Female | 11455 | 0.015 | 0.12 | 0 | 1 |
| Outsider to state | 11455 | 0.392 | 0.49 | 0 | 1 |
| House (vs. Senate) | 11455 | 0.891 | 0.31 | 0 | 1 |
| Military | 11455 | 0.356 | 0.48 | 0 | 1 |
| Lawyer | 10950 | 0.594 | 0.49 | 0 | 1 |
| Farmer | 10950 | 0.072 | 0.26 | 0 | 1 |

Note: The age of entry Min is not a mistake. William C.C. Claiborne (1775-1817) entered Congress without satisfying the constitutional age requirement.

Table 3: Some notable families in Congress

| Family Name | Year Enter | Year <br> Leave | Number of <br> Congresses | Number of <br> Members | Notable Members |
| :--- | :---: | :---: | :---: | :---: | :--- |
| Adams | 1803 | 1862 | 16 | 3 | John Quincy Adams |
| Aldrich | 1876 | Present | 32 | 5 | Nelson Wilmarth Aldrich |
| Breckinridge | 1789 | 1978 | 72 | 17 | Henry Clay |
| Bryan | 1895 | 1976 | 15 | 3 | William Jennings Bryan |
| Burr | 1791 | 1806 | 4 | 2 | Aaron Burr |
| Bush | 1951 | 1970 | 8 | 2 | George H.W. Bush |
| Du Pont | 1905 | 1928 | 9 | 2 | Henry Algernon Du Pont |
| Frelinghuysen | 1793 | Present | 25 | 6 |  |
| Gore | 1939 | 1992 | 24 | 2 | Albert Arnold Gore Jr. |
| Harrison | 1793 | 1968 | 24 | 8 | William Henry Harrison |
| Hearst | 1885 | 1906 | 5 | 2 | William Randolph Hearst |
| Hiester | 1789 | 1880 | 38 | 12 |  |
| Houston | 1823 | 1942 | 12 | 3 | Samuel Houston |
| Kennedy | 1895 | Present | 37 | 6 | John Fitzgerald Kennedy |
| Lodge | 1887 | 1952 | 37 | 4 | Henry Cabot Lodge |
| Monroe | 1789 | 1840 | 4 | 2 | James Monroe |
| Morris | 1789 | 1802 | 4 | 2 | Robert Morris |
| Pelosi | 1939 | Present | 10 | 2 | Nancy Pelosi |
| Roosevelt | 1949 | 1966 | 9 | 2 | Franklin Delano Roosevelt Jr. |

Note: Sometimes the family names are not consistent within families. For example Henry Clay came from a family where the predominant last name was Breckinridge. For ease of exposition we chose the modal last name.

Table 4: Sample means of proportion of legislators with previous relatives
Stocks: Proportion of legislators with previous relatives. Each legislator is counted in every congress he/she is in office

|  | Totals | South | Non-South | Difference | Senate | House | Difference | Democrats | Republicans | Difference |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall | . 08824 | 0.11722 | 0.07386 | 0.04336 | 0.13499 | 0.07674 | 0.05825 | 0.08311 | 0.0733 | 0.00981 |
|  | [.00371] | [.00744] | [.00412] | [.00851]*** | [.01052] | [.0035] | [.0107]*** | [.00611] | [.00595] | [.00852] |
| 1788-1859 | 0.12065 | 0.14581 | 0.10309 | 0.04272 | 0.12678 | 0.119 | 0.00778 |  |  |  |
|  | [.0075] | [.01395] | [.00812] | [.01614]*** | [.01699] | [.00763] | [.01742] |  |  |  |
| 1860-1865 | 0.10128 | 0.07407 | 0.10565 | -0.03158 | 0.14595 | 0.0874 | 0.05855 |  |  |  |
|  | [.01436] | [.03541] | [.01567] | [.03871] | [.03671] | [.0874] | [.03961] |  |  |  |
| 1866-1879 | 0.10675 | 0.13334 | 0.09422 | 0.03911 | 0.20096 | 0.08081 | 0.12015 | 0.15254 | 0.06905 | 0.08349 |
|  | [.00105] | [.02] | [.01227] | [.02346]* | [.03178] | [.00946] | [.0327]*** | [.01881] | [.01177] | [.02219]*** |
| 1880-1939 | 0.089 | 0.13496 | 0.06773 | 0.06723 | 0.15945 | 0.0722 | 0.08725 | 0.09415 | 0.08355 | 0.0106 |
|  | [.00619] | [.01367] | [.06723] | [.01509]*** | [.01868] | [.00565] | [.01889]*** | [.00913] | [.00846] | [.0106] |
| 1940-1965 | 0.0673 | 0.08315 | 0.0602 | 0.023 | 0.09532 | 0.06048 | 0.03584 | 0.06311 | 0.07285 | -0.00974 |
|  | [.00753] | [.01537] | [.00846] | [.02295] | [.02075] | [.00766] | [.02175]* | [.00957] | [.07285] | [.01544] |
| 1966-1996 | 0.06178 | 0.06917 | 0.0584 | 0.01076 | 0.10564 | 0.0517 | 0.05394 | 0.06577 | 0.05402 | 0.01175 |
|  | [.00751] | [.0126] | [.00932] | [.01567] | [.02335] | [.00725] | [.02418]** | [.01046] | [.0103] | [.01175] |
| Standard er | stered at | gislator le | in brackets | significant | 10\%; ** | cant at 5\% | * significa | at 1\% |  |  |

Flows: Proportion of freshman legislators with previous relatives. Each legislator is only counted in congress of entry

|  | Totals | South | Non-South | Difference | Senate | House | Difference | Democrats | Republicans | Difference |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall | 0.08677 | 0.11805 | 0.07316 | 0.04489 | 0.12998 | 0.08146 | 0.04852 | 0.08055 | 0.06934 | 0.01121 |
|  | [.00263] | [.00548] | [.00291] | [.00571]*** | [.0095] | [.00271] | [.00841]*** | [.00443] | [.00424] | [.00614]* |
| 1788-1859 | 0.1098 | 0.13766 | 0.095 | 0.04266 | 0.12834 | 0.10768 | 0.02066 |  |  |  |
|  | [.00518] | [.00969] | [.00601] | [.01086]*** | [.01732] | [.00542] | [.01707] |  |  |  |
| 1860-1865 | 0.09384 | 0.04167 | 0.10239 | -0.06072 | 0.21951 | 0.07667 | 0.14284 |  |  |  |
|  | [.01581] | [.02915] | [.01774] | [.04542] | [.06545] | [.01539] | [.04808]*** |  |  |  |
| 1866-1879 | 0.08588 | 0.10837 | 0.07403 | 0.03435 | 0.2 | 0.0717 | 0.1283 | 0.1173 | 0.05919 | 0.05811 |
|  | [.00817] | [.01544] | [.00944] | [.01717]** | [.03522] | [.00798] | [.02561]*** | [.01436] | [.00932] | [.01436]*** |
| 1880-1939 | 0.08025 | 0.12382 | 0.06396 | 0.05986 | 0.13044 | 0.07427 | 0.05617 | 0.07893 | 0.08251 | -0.00358 |
|  | [.00436] | [.01013] | [.0046] | [.00974]*** | [.01657] | [.00445] | [.0141]*** | [.00605] | [.00643] | [.00882] |
| 1940-1965 | 0.06726 | 0.1051 | 0.05435 | 0.05075 | 0.08523 | 0.06427 | 0.02096 | 0.07456 | 0.05667 | 0.01789 |
|  | [.00713] | [.01733] | [.00748] | [.01632]*** | [.02111] | [.00713] | [.0204] | [.01005] | [.0099] | [.01431] |
| 1966-1996 | 0.05627 | 0.06789 | 0.05063 | 0.01725 | 0.09244 | 0.05218 | 0.04025 | 0.06187 | 0.0507 | 0.01117 |
|  | [.00673] | [.01287] | [.00781] | [.01435] | [.02666] | [.00685] | [.02228]* | [.00986] | [.00918] | [.0135] |

Standard errors in brackets. * significant at 10\%; ** significant at 5\%; *** significant at 1\%
Party differences shown after 1866 once the modern two party system emerged.

Table 5: Dynastic bias across occupations

|  | (1) <br> \% with father <br> in same occupation | $(2)$ <br> \% of fathers <br> in each occupation | (3) |
| :--- | :---: | :---: | :---: |
| Occupation | $6.53 \%$ | $1.48 \%$ | 4.41 |
| Federal Public Admin. | $12.21 \%$ | $2.23 \%$ | 5.48 |
| Carpenter | $8.71 \%$ | $0.88 \%$ | 9.96 |
| Electrician | $2.27 \%$ | $0.16 \%$ | 14.28 |
| Dentist | $10.53 \%$ | $0.70 \%$ | 14.97 |
| Plumber | $12.31 \%$ | $0.48 \%$ | 25.55 |
| Doctor | $1.33 \%$ | $0.04 \%$ | 34.45 |
| Economist | $2.56 \%$ | $0.01 \%$ | 255.60 |
| Legislator |  |  |  |

Note: $(3)=(1) /(2)$.
The methodology for computing the legislator figures is explained in the appendix and was designed to provide a lower bound on the dynastic bias ratio for legislators.
The data for non political occupations comes from the General Social Surveys (ICPSR study 4295).

Table 6: The effect of previous relatives on personal characteristics

|  | (1) <br> House | (2) <br> House | (3) <br> Age of entry | (4) <br> Age of entry | (5) <br> Pre. public off | (6) <br> Pre. public off. | (7) <br> College degre | (8) <br> College degree | (9) <br> Outsider | (10) <br> Outsider | (11) <br> Female | (12) <br> Female |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Previous Relative | -0.07503 | -0.0764 | -0.50866 | -0.34821 | -0.05641 | -0.05611 | 0.14033 | 0.12945 | -0.03102 | -0.02571 | 0.02492 | 0.02566 |
|  | [0.01842]*** | [0.01780]*** | [0.35166] | [0.29524] | [0.01849]*** | [0.01734]*** | [0.01805]*** | [0.01718]*** | [0.02218] | [0.02038] | [0.00795]*** | [0.00771]*** |
| House |  |  |  | -4.98911 |  | -0.00657 |  | -0.05303 |  | -0.02909 |  | 0.00884 |
|  |  |  |  | [0.32099]*** |  | [0.01575] |  | [0.01784]*** |  | [0.01412]** |  | [0.00438]** |
| Age of entry |  | -0.00619 |  |  |  | 0.00559 |  | -0.00762 |  | 0.00543 |  | 0.00071 |
|  |  | [0.00078]*** |  |  |  | [0.00058]*** |  | [0.00047]*** |  | [0.00080]*** |  | [0.00019]*** |
| Pre. public office |  | -0.00351 |  | 2.40951 |  |  |  | 0.00453 |  | -0.0788 |  | -0.00191 |
|  |  | [0.00819] |  | [0.26049]*** |  |  |  | [0.01136] |  | [0.01192]*** |  | [0.00421] |
| College degree |  | -0.02606 |  | -3.01501 |  | 0.00417 |  |  |  | -0.08569 |  | 0.00314 |
|  |  | [0.00757]*** |  | [0.17918]*** |  | [0.01042] |  |  |  | [0.01593]*** |  | [0.00207] |
| Outsider |  | -0.01264 |  | 1.90007 |  | -0.06401 |  | -0.07575 |  |  |  | 0.0085 |
|  |  | [0.00594]** |  | [0.27805]*** |  | [0.01059]*** |  | [0.01417]*** |  |  |  | [0.00385]** |
| Female |  | 0.05167 |  | 3.33733 |  | -0.02092 |  | 0.03731 |  | 0.11441 |  |  |
|  |  | [0.02664]* |  | [0.76922]*** |  | [0.04658] |  | [0.02341] |  | [0.04944]** |  |  |
| Constant | 1.05567 | 1.25058 | 27.32269 | 34.84151 | -0.03379 | -0.16729 | 0.8865 | 1.16926 | 0.24887 | 0.20351 | 0.0088 | -0.02484 |
|  | [0.00278]*** | [0.02223]*** | [0.06347]*** | [0.40889]*** | [0.00401]*** | [0.02506]*** | [0.00311]*** | [0.02570]*** | [0.00431]*** | [0.02953]*** | [0.00094]*** | [0.00846]*** |
| Year | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| State | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Observations | 8765 | 8765 | 8765 | 8765 | 8765 | 8765 | 8765 | 8765 | 8765 | 8765 | 8765 | 8765 |
| R-squared | 0.1 | 0.13 | 0.15 | 0.22 | 0.04 | 0.05 | 0.16 | 0.19 | 0.19 | 0.22 | 0.09 | 0.09 |

Sample: Individuals who did not follow a relative's death to avoid contamination with cases where a relative enters Congress to complete the term of a deceased legislator.
To avoid censoring, we exclude individuals born after 1800.
Robust standard errors clustered at the state level. * significant at 10\%; ** significant at 5\%; *** significant at 1\%

Table 7: The effect of previous relatives on tenure length

|  | (1) <br> longterm | (2) <br> longterm | (3) totaltenure | (4) <br> totaltenure |
| :---: | :---: | :---: | :---: | :---: |
| Previous Relative | 0.00995 | 0.02084 | 0.0706 | -0.04164 |
|  | [0.01974] | [0.02001] | [0.14075] | [0.13742] |
| House |  | 0.2181 |  | -1.03206 |
|  |  | [0.02055]*** |  | [0.14718]*** |
| Age of entry |  | -0.00663 |  | -0.08639 |
|  |  | [0.00058]*** |  | [0.00657]*** |
| Pre. public office |  | 0.05972 |  | 0.52768 |
|  |  | [0.01084]*** |  | [0.08598]*** |
| College degree |  | 0.03864 |  | 0.17706 |
|  |  | [0.01351]*** |  | [0.06927]** |
| Outsider |  | -0.01875 |  | -0.15024 |
|  |  | [0.01073]* |  | [0.07615]* |
| Female |  | -0.02124 |  | -0.35644 |
|  |  | [0.03688] |  | [0.22569] |
| Constant | 0.92853 | 0.85211 | 2.53806 | 5.88934 |
|  | [0.00358]*** | [0.03266]*** | [0.02882]*** | [0.23957]*** |
| Year | Y | Y | Y | Y |
| State | Y | Y | Y | Y |
| Observations | 8765 | 8765 | 8765 | 8765 |
| R -squared | 0.1 | 0.14 | 0.17 | 0.22 |

Sample: Individuals who did not follow a relative's death and born after 1800.
Robust standard errors clustered at the state level.

* significant at $10 \%$; ** significant at $5 \%$; *** significant at $1 \%$

Table 8: Political competition and dynastic legislators

|  | Dependent Variable: Prerelative |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) |
| Political Competition | 0.1303 | . 1451 |  |  |
|  | [.086] | [.0877] |  |  |
| Political Competition ${ }^{\wedge} 2$ | . 4217 | . 4448 |  |  |
|  | [.1770]** | [.1810]** |  |  |
| High political competition dummy |  |  | -0.0188 | -. 01799 |
|  |  |  | [.00997]* | [.0103]* |
| Constant | 0.0408 | 0.0980 | 0.0487 | 0.1046 |
|  | [0.0286] | [0.0583]* | [0.299] | [0.619]* |
| Year Effects | Y | Y | Y | Y |
| State Effects | Y | Y | Y | Y |
| Joint significance (F test statistic) | 4.10** | 3.92** |  |  |
| Excluding first 30 years of statehood | N | Y | N | Y |
| Observations | 6395 | 6150 | 6395 | 6150 |
| R-Squared | 0.03 | 0.03 | 0.03 | 0.03 |

Sample: Excludes individuals who entered Congress before 1879 due to lack of political competition data for earlier years.
The political competition index ranges from -0.5 (all seats in the state legislature held by one party, or least competitive) to 0 (seats held evenly by the two major parties, or most competitive).
The High competition dummy takes the value 1 whenever the political competition index is higher than the mid point -0.25 .
Robust standard errors clustered at state level in brackets. * significant at 10\%; ** significant at 5\%; *** significant at 1\%

Table 9: Tenure length and Postrelatives

|  | Dependent Variable: Postrelatives |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Longterm | 0.02144 | 0.01835 | 0.02667 | 0.02901 | 0.02892 | 0.02641 |
|  | [0.00491]*** | [0.00409]*** | [0.00459]*** | [0.00431]*** | [0.00454]*** | [0.00412]*** |
| Constant | 0.07125 | 0.06598 | 0.07174 | 0.3839 | 0.26344 | 0.3034 |
|  | [0.00772]*** | [0.00694]*** | [0.00756]*** | [0.05260]*** | [0.08606]*** | [0.08447]*** |
| Prerelative |  |  |  |  | 0.16892 |  |
|  |  |  |  |  | [0.02601]*** |  |
| Female |  |  |  |  | -0.05281 | 0.02666 |
|  |  |  |  |  | [0.02537]** | [0.04134] |
| College degree |  |  |  |  | 0.01241 | 0.00833 |
|  |  |  |  |  | [0.00861] | [0.00825] |
| Outsider |  |  |  |  | -0.00039 | -0.00341 |
|  |  |  |  |  | [0.00818] | [0.00810] |
| Previous public office |  |  |  |  | -0.00125 | -0.002 |
|  |  |  |  |  | [0.00772] | [0.00768] |
| Military |  |  |  |  | 0.01498 | 0.00987 |
|  |  |  |  |  | [0.00688]** | [0.00589] |
| Lawyer |  |  |  |  | -0.00048 | 0.00094 |
|  |  |  |  |  | [0.00583] | [0.00709] |
| Farmer |  |  |  |  | 0.00974 | 0.00247 |
|  |  |  |  |  | [0.01010] | [0.01005] |
| Senate only |  |  |  |  | 0.05005 | 0.04142 |
|  |  |  |  |  | [0.01182]*** | [0.01083]*** |
| House to Senate |  |  |  |  | 0.06844 | 0.06355 |
|  |  |  |  |  | [0.02305]*** | [0.02334]*** |
| Senate to House |  |  |  |  | 0.0877 | 0.06946 |
|  |  |  |  |  | [0.06448] | [0.06254] |
| Age at entry \& death | N | N | N | N | Y | Y |
| Year and State Effects | N | N | N | Y | Y | Y |
| Died in office excluded | N | Y | Y | Y | Y | Y |
| Born before 1910 | N | N | Y | Y | Y | Y |
| Includes Members with | Y | Y | Y | Y | Y | N |
| Previous Relatives | Y | $Y$ | $Y$ | $Y$ | $Y$ | N |
| Observations | 11455 | 10379 | 8812 | 8812 | 8490 | 7740 |
| R-squared | 0 | 0 | 0 | 0.09 | 0.13 | 0.09 |

Robust standard errors clustered at state level in brackets. Age at entry and death controls are dummies for the decade of age (e.g., 40s, 50s, etc.) at which the legislator entered Congress/died.

* significant at $10 \%$; ** significant at $5 \%$; *** significant at $1 \%$

Table 10: Tenure length and Postrelatives
Dependent Variable: Postrelatives

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total tenure | $\begin{gathered} 0.0041 \\ {[0.00084]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.00231 \\ {[0.00074]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.00439 \\ {[0.00101]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.00763 \\ {[0.00105]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.00561 \\ {[0.00095]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.00392 \\ {[0.00095]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.0081 \\ {[0.00195]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.00714 \\ {[0.00173]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.01368 \\ {[0.00225]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.01561 \\ {[0.00183]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.01314 \\ {[0.00195]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.01155 \\ {[0.00203]^{* * *}} \end{gathered}$ |
| Total tenure^2 |  |  |  |  |  |  | $\begin{gathered} -0.00027 \\ {[0.00014]^{*}} \end{gathered}$ | $\begin{gathered} -0.00034 \\ {[0.00011]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.00066 \\ {[0.00013]^{\star * *}} \end{gathered}$ | $\begin{gathered} -0.00056 \\ {[0.00010] * * *} \end{gathered}$ | $\begin{gathered} -0.00052 \\ {[0.00010]^{\star * *}} \end{gathered}$ | $\begin{gathered} -0.00053 \\ {[0.00012]^{\star * *}} \end{gathered}$ |
| Constant | $\begin{gathered} 0.06993 \\ {[0.00765]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.06958 \\ {[0.00732]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.07399 \\ {[0.00817]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.37914 \\ {[0.05160]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.26159 \\ {[0.08609]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.30048 \\ {[0.08402]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.06226 \\ {[0.00755]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.06066 \\ {[0.00631]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.05737 \\ {[0.00668]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.36147 \\ {[0.05136]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.25416 \\ {[0.08527]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.29287 \\ {[0.08305]^{\star * *}} \end{gathered}$ |
| Prerelative |  |  |  |  | $\begin{gathered} 0.16876 \\ {[0.02575]^{\star * *}} \end{gathered}$ |  |  |  |  |  | $\begin{gathered} 0.16857 \\ {[0.02564]^{\star * *}} \end{gathered}$ |  |
| Female |  |  |  |  | $\begin{gathered} -0.04936 \\ {[0.02473]^{*}} \end{gathered}$ | $\begin{gathered} 0.02947 \\ {[0.04159]} \end{gathered}$ |  |  |  |  | $\begin{gathered} -0.04755 \\ {[0.02443]^{\star}} \end{gathered}$ | $\begin{gathered} 0.02861 \\ {[0.04117]} \end{gathered}$ |
| College degree |  |  |  |  | $\begin{gathered} 0.01269 \\ {[0.00877]} \end{gathered}$ | $\begin{gathered} 0.00866 \\ {[0.00840]} \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.01205 \\ {[0.00870]} \end{gathered}$ | $\begin{gathered} 0.00802 \\ {[0.00833]} \end{gathered}$ |
| Outsider |  |  |  |  | $\begin{gathered} -0.00013 \\ {[0.00830]} \end{gathered}$ | $\begin{gathered} -0.00333 \\ {[0.00819]} \end{gathered}$ |  |  |  |  | $\begin{gathered} -0.00033 \\ {[0.00823]} \end{gathered}$ | $\begin{gathered} -0.00351 \\ {[0.00812]} \end{gathered}$ |
| Previous public office |  |  |  |  | $\begin{gathered} -0.00181 \\ {[0.00764]} \end{gathered}$ | $\begin{gathered} -0.00224 \\ {[0.00750]} \end{gathered}$ |  |  |  |  | $\begin{aligned} & -0.00219 \\ & {[0.00769]} \end{aligned}$ | $\begin{gathered} -0.00264 \\ {[0.00756]} \end{gathered}$ |
| Military |  |  |  |  | $\begin{gathered} 0.01481 \\ {[0.00691]^{* *}} \end{gathered}$ | $\begin{gathered} 0.00979 \\ {[0.00596]} \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.01488 \\ {[0.00688]^{* *}} \end{gathered}$ | $\begin{gathered} 0.0098 \\ {[0.00590]} \end{gathered}$ |
| Lawyer |  |  |  |  | $\begin{gathered} 0.00004 \\ {[0.00590]} \end{gathered}$ | $\begin{gathered} 0.00157 \\ {[0.00716]} \end{gathered}$ |  |  |  |  | $\begin{gathered} -0.0003 \\ {[0.00587]} \end{gathered}$ | $\begin{gathered} 0.00123 \\ {[0.00712]} \end{gathered}$ |
| Farmer |  |  |  |  | $\begin{gathered} 0.01047 \\ {[0.00999]} \end{gathered}$ | $\begin{gathered} 0.00296 \\ {[0.01006]} \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.01058 \\ {[0.01004]} \end{gathered}$ | $\begin{gathered} 0.00296 \\ {[0.01007]} \end{gathered}$ |
| Senate only |  |  |  |  | $\begin{gathered} 0.03655 \\ {[0.01136]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.03032 \\ {[0.01026]^{\star * *}} \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.0337 \\ {[0.01115]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.02735 \\ {[0.00986]^{* * *}} \end{gathered}$ |
| House to Senate |  |  |  |  | $\begin{gathered} 0.04998 \\ {[0.02342]^{\star *}} \end{gathered}$ | $\begin{gathered} 0.05314 \\ {[0.02352]^{\star *}} \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.0485 \\ {[0.02341]^{\star *}} \end{gathered}$ | $\begin{gathered} 0.05081 \\ {[0.02350]^{\star *}} \end{gathered}$ |
| Senate to House |  |  |  |  | $\begin{gathered} 0.08485 \\ {[0.06249]} \\ \hline \end{gathered}$ | $\begin{gathered} 0.07051 \\ {[0.06160]} \\ \hline \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.0796 \\ {[0.06355]} \\ \hline \end{gathered}$ | $\begin{gathered} 0.06415 \\ {[0.06245]} \\ \hline \end{gathered}$ |
| Age at entry \& death | N | N | N | N | Y | Y | N | N | N | N | Y | Y |
| Year and State Effects | N | N | N | Y | Y | Y | N | N | N | Y | Y | Y |
| Died in office excluded | N | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y |
| Born before 1910 | N | N | Y | Y | Y | Y | N | N | Y | Y | Y | Y |
| Includes Members with Previous Relatives | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | N |
| Observations | 11455 | 10379 | 8812 | 8812 | 8490 | 7740 | 11455 | 10379 | 8812 | 8812 | 8490 | 7740 |
| R -squared | 0 | 0 | 0 | 0.09 | 0.13 | 0.09 | 0 | 0 | 0 | 0.09 | 0.13 | 0.09 |

Table 11: Characteristics of close winners versus close losers in first re-election attempt

|  | $2.5 \%$ |  | margin of vote window |  | $5 \%$ margin of vote window |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Win | Lose | Difference | Win | Lose | Difference |
| Posterior relative in office | 0.071 | 0.028 | 0.043 | 0.067 | 0.031 | 0.035 |
|  | $[.016]$ | $[.01]$ | $[.019]^{* *}$ | $[.01]$ | $[.008]$ | $[.013]^{* *}$ |
| Year | 1885.48 | 1887.00 | -2.41 | 1885.01 | 1888.88 | -3.87 |
| Age at entry | $[2.04]$ | $[2.14]$ | $[2.96]$ | $[1.42]$ | $[1.65]$ | $[2.16]^{*}$ |
|  | 43.88 | 44.68 | -0.8 | 43.82 | 44.72 | -0.90 |
| Age at death | $[.55]$ | $[.6]$ | $[.81]$ | $[.37]$ | $[.44]$ | $[.57]$ |
|  | 71.18 | 71.00 | 0.18 | 71.51 | 70.90 | 0.61 |
| Female | $[.75]$ | $[.78]$ | $[1.08]$ | $[.48]$ | $[.57]$ | $[.74]$ |
|  | 0.007 | 0.008 | -0.001 | 0.005 | 0.004 | 0.001 |
| College degree | $[.005]$ | $[.006]$ | $[.008]$ | $[.003]$ | $[.003]$ | $[.004]$ |
|  | 0.607 | 0.633 | -0.027 | 0.600 | 0.606 | -0.006 |
| Outsider to state | $[.03]$ | $[.03]$ | $[.043]$ | $[.02]$ | $[.022]$ | $[.03]$ |
|  | 0.449 | 0.422 | 0.027 | 0.422 | 0.436 | -0.014 |
| Previous public office | $[.03]$ | $[.031]$ | $[.044]$ | $[.02]$ | $[.023]$ | $[.031]$ |
|  | 0.783 | 0.869 | -0.086 | 0.803 | 0.826 | -0.023 |
| Military | $[.025]$ | $[.021]$ | $[.033]^{* *}$ | $[.016]$ | $[.017]$ | $[.024]$ |
|  | 0.300 | 0.295 | 0.005 | 0.316 | 0.281 | 0.035 |
| Lawyer | $[.028]$ | $[.029]$ | $[.04]$ | $[.019]$ | $[.021]$ | $[.028]$ |
|  | 0.663 | 0.596 | 0.067 | 0.611 | 0.567 | 0.044 |
| Farmer | $[.029]$ | $[.031]$ | $[.043]$ | $[.02]$ | $[.023]$ | $[.031]$ |
| Business | 0.042 | 0.065 | -0.023 | 0.062 | 0.062 | 0.000 |
|  | $[.012]$ | $[.016]$ | $[.02]$ | $[.01]$ | $[.011]$ | $[.015]$ |
| Observations | 0.272 | 0.318 | -0.046 | 0.292 | 0.329 | -0.037 |
|  | $[.028]$ | $[.03]$ | $[.041]$ | $[.019]$ | $[.022]$ | $[.027]$ |

Sample: Individuals with no pre-relatives, who did not die in office and, to avoid censoring, born before 1910. Standard errors in brackets. * significant at 10\%; ** significant at 5\%; *** significant at 1\%

Table 12: IV-RD First stage
Dependent Variable: Longterm

|  | (1) | (2) | (3) | (4) | (5) | (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2.50\% | 2.50\% | 2.50\% | 5\% | 5\% | 5\% |
| Win | 0.85671 | 0.54542 | 0.48855 | 0.90842 | 0.56498 | 0.53381 |
|  | [0.08332]*** | [0.36102] | [0.34155] | [0.05078]*** | [0.16343]*** | [0.15742]*** |
| Female*(1-Win) |  | -0.28485 | -0.30062 |  | -0.25325 | -0.25486 |
|  |  | [0.16346]* | [0.16208]* |  | [0.12338]** | [0.12287]** |
| College degree*(1-Win) |  | 0.02928 | 0.02143 |  | 0.04147 | 0.03663 |
|  |  | [0.06800] | [0.06610] |  | [0.04448] | [0.04367] |
| Outsider*(1-Win) |  | -0.0457 | -0.05481 |  | 0.03192 | 0.01537 |
|  |  | [0.06241] | [0.05523] |  | [0.04400] | [0.04465] |
| Previous public office*(1-Win) |  | 0.0271 | 0.00535 |  | -0.00656 | -0.02861 |
|  |  | [0.09011] | [0.09849] |  | [0.06727] | [0.06795] |
| Age at entry*(1-Win) |  | -0.00736 | -0.00659 |  | -0.00755 | -0.00708 |
|  |  | [0.00351]** | [0.00345]* |  | [0.00288]** | [0.00278]** |
| Age at death*(1-Win) |  | 0.00001 | 0.00051 |  | 0.00033 | 0.00054 |
|  |  | [0.00247] | [0.00237] |  | [0.00134] | [0.00122] |
| Military*(1-Win) |  | -0.02747 | -0.04003 |  | -0.00022 | -0.01112 |
|  |  | [0.06738] | [0.06389] |  | [0.04710] | [0.04447] |
| Farmer*(1-Win) |  | 0.06941 | 0.08244 |  | -0.07103 | -0.06207 |
|  |  | [0.32986] | [0.32392] |  | [0.13973] | [0.13991] |
| Lawyer*(1-Win) |  | -0.04137 | -0.03353 |  | -0.0623 | -0.05129 |
|  |  | [0.27508] | [0.26778] |  | [0.09118] | [0.09285] |
| Business*(1-Win) |  | 0.01067 | -0.01011 |  | -0.05102 | -0.04707 |
|  |  | [0.29249] | [0.28394] |  | [0.10052] | [0.10104] |
| Prerelative*(1-Win) |  |  | -0.16462 |  |  | -0.13851 |
|  |  |  | [0.10055] |  |  | [0.08176]* |
| Constant | 0.14329 | 0.45458 | 0.51145 | 0.09158 | 0.43502 | 0.46619 |
|  | [0.08332]* | [0.36102] | [0.34155] | [0.05078]* | [0.16343]** | [0.15742]*** |
| Region | Y | Y | Y | Y | Y | Y |
| Decade | Y | Y | Y | Y | Y | Y |
| Includes Members with | N | N | Y | N | N | Y |
| Previous Relatives |  |  |  |  |  |  |
| Observations | 518 | 506 | 551 | 1065 | 1047 | 1127 |
| R-squared | 0.65 | 0.66 | 0.67 | 0.68 | 0.69 | 0.69 |
| F statistic | 171.72 | 332.5 | 69.61 | 2996.79 | 5397.38 | 6170.15 |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets.

* significant at 10\%; ** significant at 5\%;*** significant at 1\%

Table 13: IV-RD Second stage
Dependent Variable: Postrelative

|  | (1)$2.5 \%$ | (2) | (3) | (4) | (5) | (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2.5\% | 2.5\% | 5\% | 5\% | 5\% |
| Longterm | $\begin{gathered} 0.04866 \\ {[0.02120]^{* *}} \end{gathered}$ | 0.05235 | 0.04645 | 0.04214 | 0.04024 | 0.03086 |
|  |  | [0.02297]** | [0.02484]* | [0.01220]*** | [0.01252]*** | [0.01781]* |
| Female |  | 0.02772 | -0.0514 |  | 0.0181 | -0.03367 |
|  |  | [0.04288] | [0.07404] |  | [0.02115] | [0.04819] |
| College degree |  | 0.0608 | 0.04973 |  | 0.03954 | 0.03352 |
|  |  | [0.01870]*** | [0.01763]*** |  | [0.01450]*** | [0.01390]** |
| Outsider |  | 0.01845 | 0.01741 |  | -0.00996 | -0.01255 |
|  |  | [0.02417] | [0.02396] |  | [0.01694] | [0.01533] |
| Previous public office |  | 0.01996 | 0.00238 |  | -0.01095 | -0.01046 |
|  |  | [0.01986] | [0.02126] |  | [0.01936] | [0.02055] |
| Age at entry |  | -0.00089 | -0.00074 |  | -0.00053 | -0.0006 |
|  |  | [0.00130] | [0.00122] |  | [0.00088] | [0.00090] |
| Age at death |  | 0.0003 | 0.00029 |  | 0.00013 | -0.00015 |
|  |  | [0.00103] | [0.00100] |  | [0.00069] | [0.00077] |
| Military |  | 0.00157 | -0.016 |  | 0.01881 | 0.00958 |
|  |  | [0.02297] | [0.02584] |  | [0.01594] | [0.01508] |
| Farmer |  | 0.02417 | 0.04953 |  | -0.01533 | -0.0154 |
|  |  | [0.04588] | [0.04894] |  | [0.03819] | [0.03894] |
| Lawyer |  | 0.0687 | 0.0725 |  | 0.00206 | 0.00124 |
|  |  | [0.03875]* | [0.03831]* |  | [0.02962] | [0.03051] |
| Business |  | 0.10496 | 0.10257 |  | 0.01457 | 0.00613 |
|  |  | [0.04554]** | [0.04499]** |  | [0.02894] | [0.03034] |
| Prerelative |  |  | 0.13129 |  |  | 0.16203 |
|  |  |  | [0.07202]* |  |  | [0.05041]*** |
| Constant | 0.0072 | -0.11938 | -0.08128 | 0.00228 | -0.00489 | 0.04613 |
|  | [0.04453] | [0.05730]** | [0.07374] | [0.02385] | [0.05694] | [0.06501] |
| Region | Y | Y | Y | Y | Y | Y |
| Decade | Y | Y | Y | Y | Y | Y |
| Includes Members with | N | N | Y | N | N | Y |
| Previous Relatives Observations | 518 | 506 | 551 | 1065 | 1047 | 1127 |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets.

* significant at $10 \%$; ** significant at $5 \%$; *** significant at $1 \%$

Table 14: IV-RD First stage
Dependent Variable: Total tenure

|  | (1) $2.5 \%$ (2) |  | (3) $2.5 \%$ (4) |  | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | \% |  |  |  | \% |  |  |
|  | Total tenure | Total tenure^2 |  |  | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 |
| Win | 0.91952 | 2.46301 | 2.09578 | 13.5333 | 2.14543 | 14.57344 | 1.55957 | 8.60396 | 0.88745 | -8.7073 | 0.99698 | -5.46495 |
|  | [0.37192]** | [3.29757] | [1.56576] | [16.14467] | [1.39629] | [15.28721] | [0.51354]*** | [8.12704] | [1.39486] | [20.07919] | [1.39669] | [19.94512] |
| Female*(1-Win) |  |  | -0.85346 | -2.47058 | -0.18697 | -0.26698 |  |  | 0.25157 | 18.29888 | 0.65911 | 17.69107 |
|  |  |  | [1.63394] | [18.17377] | [1.17766] | [14.40721] |  |  | [1.04577] | [15.19806] | [0.65042] | [9.97511]* |
| College degree*(1-Win) |  |  | -0.62977 | -6.17468 | -0.62398 | -6.04478 |  |  | -0.36366 | -5.81533 | -0.3064 | -4.85652 |
|  |  |  | [0.37345]* | [3.97209] | [0.35523]* | [3.72070] |  |  | [0.22388] | [3.05807]* | [0.21969] | [2.93595] |
| Outsider*(1-Win) |  |  | 0.19076 | 3.98504 | 0.11378 | 2.75672 |  |  | 0.45536 | 5.24759 | 0.38827 | 4.5581 |
|  |  |  | [0.47036] | [4.76448] | [0.42911] | [4.33027] |  |  | [0.36312] | [4.61614] | [0.32137] | [4.05981] |
| Previous public office*(1-Win) |  |  | -0.15446 | -3.50687 | -0.1689 | -3.53089 |  |  | -0.22921 | -3.546 | -0.33236 | -4.56012 |
|  |  |  | [0.63461] | [9.48908] | [0.59487] | [8.66078] |  |  | [0.52572] | [7.27936] | [0.47787] | [6.60084] |
| Age at entry*(1-Win) |  |  | -0.01071 | -0.23684 | -0.0079 | -0.21231 |  |  | 0.00047 | 0.10852 | 0.00072 | 0.09938 |
|  |  |  | [0.04168] | [0.49932] | [0.03870] | [0.46495] |  |  | [0.02773] | [0.42919] | [0.02567] | [0.40092] |
| Age at death*(1-Win) |  |  | 0.00748 | 0.16224 | 0.0062 | 0.14196 |  |  | -0.00734 | -0.22054 | -0.00529 | -0.17494 |
|  |  |  | [0.01841] | [0.24962] | [0.01741] | [0.22882] |  |  | [0.01603] | [0.29628] | [0.01363] | [0.25666] |
| Military*(1-Win) |  |  | -0.38675 | -8.44015 | -0.30961 | -7.00552 |  |  | -0.36919 | -4.93085 | -0.40479 | -5.44864 |
|  |  |  | [0.39069] | [5.23155] | [0.37282] | [4.82890] |  |  | [0.34357] | [4.35722] | [0.32930] | [4.16933] |
| Farmer*(1-Win) |  |  | 2.31832 | 22.46085 | 2.11063 | 20.72462 |  |  | -0.13025 | -8.97806 | -0.0139 | -7.1373 |
|  |  |  | [1.76125] | [20.39928] | [1.70489] | [19.71728] |  |  | [0.93313] | [13.77190] | [0.90811] | [13.58363] |
| Lawyer*(1-Win) |  |  | 1.94874 | 20.92147 | 2.05275 | 22.11254 |  |  | 0.28962 | 0.50258 | 0.32886 | 1.25326 |
|  |  |  | [1.37282] | [16.65534] | [1.35515] | [16.25085] |  |  | [0.80417] | [12.78674] | [0.82947] | [13.02907] |
| Business*(1-Win) |  |  | 1.68579 | 19.4187 | 1.73311 | 20.06529 |  |  | 0.3067 | 2.09792 | 0.39328 | 3.33354 |
|  |  |  | [1.38873] | [15.50333] | [1.38288] | [15.43970] |  |  | [0.83700] | [11.89180] | [0.85748] | [12.09588] |
| Prerelative*(1-Win) |  |  |  |  | 0.35082 | 3.75454 |  |  |  |  | 0.43939 | 6.88265 |
|  |  |  |  |  | [0.38440] | [4.41980] |  |  |  |  | [0.39856] | [4.49652] |
| Female |  |  | -0.8899 | -17.1264 | -1.53744 | -18.8361 |  |  | -1.62782 | -32.48608 | -1.97315 | -31.0128 |
|  |  |  | [1.26464] | [13.67318] | [0.63574]** | [7.94717]** |  |  | [0.86762]* | [13.61543]** | [0.48382]*** | [8.66274]*** |
| College degree |  |  | 0.72488 | 6.83562 | 0.70863 | 6.75522 |  |  | 0.4128 | 5.08273 | 0.37316 | 4.50663 |
|  |  |  | [0.20222]*** | [1.81987]*** | [0.20445]*** | [1.88637]*** |  |  | [0.17086]** | [2.44652]** | [0.16308]** | [2.25009]* |
| Outsider |  |  | 0.04178 | -0.91903 | 0.06283 | -0.40667 |  |  | -0.09626 | -1.03868 | -0.12783 | -1.41325 |
|  |  |  | [0.30117] | [2.75092] | [0.27336] | [2.50683] |  |  | [0.19387] | [2.51324] | [0.17940] | [2.27444] |

Table 14 Continued: IV-RD First Stage

|  | (1) $2.5 \%$ (2) |  | (3) $2.5 \%$ (4) |  | (5) (6) |  | (7) (8) |  | (9) (10) | (10) | (11) | (12) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | \% |  |  |  |  |  |  |
|  | Total tenure | Total tenure^2 |  |  | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 |
| Previous public office |  |  | $\begin{gathered} \hline 0.32412 \\ {[0.24994]} \end{gathered}$ | $\begin{gathered} \hline 1.85593 \\ {[3.17701]} \end{gathered}$ | $\begin{gathered} 0.31081 \\ {[0.22773]} \end{gathered}$ | $\begin{gathered} 2.13175 \\ {[2.88226]} \end{gathered}$ |  |  | $\begin{gathered} 0.4166 \\ {[0.23680]^{*}} \end{gathered}$ | $\begin{gathered} 5.59844 \\ {[3.73079]} \end{gathered}$ | $\begin{gathered} 0.40282 \\ {[0.21001]^{*}} \end{gathered}$ | $\begin{gathered} 5.50927 \\ {[3.31148]} \end{gathered}$ |
| Age at entry |  |  | $\begin{gathered} -0.04134 \\ {[0.02665]} \end{gathered}$ | $\begin{gathered} -0.40763 \\ {[0.30756]} \end{gathered}$ | $\begin{gathered} -0.04045 \\ {[0.02473]} \end{gathered}$ | $\begin{gathered} -0.39362 \\ {[0.28638]} \end{gathered}$ |  |  | $\begin{gathered} -0.07056 \\ {[0.01542]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.97713 \\ {[0.29048]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.06659 \\ {[0.01410]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.91794 \\ {[0.26915]^{* * *}} \end{gathered}$ |
| Age at death |  |  | $\begin{gathered} 0.02064 \\ {[0.00998]^{\star \star}} \end{gathered}$ | $\begin{gathered} 0.25298 \\ {[0.11881]^{\star \star}} \end{gathered}$ | $\begin{gathered} 0.02022 \\ {[0.00964]^{* *}} \end{gathered}$ | $\begin{gathered} 0.24051 \\ {[0.11478]^{\star \star}} \end{gathered}$ |  |  | $\begin{gathered} 0.03914 \\ {[0.01162]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.66051 \\ {[0.25427]^{* *}} \end{gathered}$ | $\begin{gathered} 0.03602 \\ {[0.01032]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.59596 \\ {[0.22442]^{* \star}} \end{gathered}$ |
| Military |  |  | $\begin{gathered} 0.18733 \\ {[0.24334]} \end{gathered}$ | $\begin{gathered} 4.06673 \\ {[3.07953]} \end{gathered}$ | $\begin{gathered} 0.11984 \\ {[0.23488]} \end{gathered}$ | $\begin{gathered} 3.06974 \\ {[2.88691]} \end{gathered}$ |  |  | $\begin{gathered} 0.32076 \\ {[0.24411]} \end{gathered}$ | $\begin{gathered} 4.19063 \\ {[3.29040]} \end{gathered}$ | $\begin{gathered} 0.33917 \\ {[0.23506]} \end{gathered}$ | $\begin{gathered} 4.68407 \\ {[3.12650]} \end{gathered}$ |
| Farmer |  |  | $\begin{gathered} -2.09107 \\ {[1.63213]} \end{gathered}$ | $\begin{aligned} & -21.57529 \\ & {[20.35181]} \end{aligned}$ | $\begin{gathered} -1.83526 \\ {[1.62287]} \end{gathered}$ | $\begin{aligned} & -19.51768 \\ & {[20.05031]} \end{aligned}$ |  |  | $\begin{gathered} -0.25056 \\ {[0.75909]} \end{gathered}$ | $\begin{gathered} 3.26882 \\ {[12.46443]} \end{gathered}$ | $\begin{gathered} -0.28007 \\ {[0.72241]} \end{gathered}$ | $\begin{gathered} 2.37507 \\ {[12.15183]} \end{gathered}$ |
| Lawyer |  |  | $\begin{gathered} -1.91417 \\ {[1.27856]} \end{gathered}$ | $\begin{gathered} -19.80559 \\ {[16.81483]} \end{gathered}$ | $\begin{gathered} -1.9923 \\ {[1.29756]} \end{gathered}$ | $\begin{gathered} -20.76657 \\ {[16.75531]} \end{gathered}$ |  |  | $\begin{gathered} -0.52406 \\ {[0.71841]} \end{gathered}$ | $\begin{gathered} -2.6361 \\ {[12.29849]} \end{gathered}$ | $\begin{gathered} -0.52518 \\ {[0.72058]} \end{gathered}$ | $\begin{gathered} -3.08716 \\ {[12.26489]} \end{gathered}$ |
| Business |  |  | $\begin{gathered} -1.64618 \\ {[1.25950]} \end{gathered}$ | $\begin{aligned} & -18.55955 \\ & {[16.06092]} \end{aligned}$ | $\begin{gathered} -1.70171 \\ {[1.27524]} \end{gathered}$ | $\begin{aligned} & -19.05244 \\ & {[16.04406]} \end{aligned}$ |  |  | $\begin{gathered} -0.63366 \\ {[0.64879]} \end{gathered}$ | $\begin{gathered} -6.31587 \\ {[10.81173]} \end{gathered}$ | $\begin{gathered} -0.63442 \\ {[0.64749]} \end{gathered}$ | $\begin{gathered} -6.52715 \\ {[10.78996]} \end{gathered}$ |
| Prerelative |  |  |  |  | $\begin{gathered} -1.04683 \\ {[0.25083]^{* * *}} \end{gathered}$ | $\begin{gathered} -9.99006 \\ {[2.55438]^{* * *}} \end{gathered}$ |  |  |  |  | $\begin{gathered} -0.83141 \\ {[0.24496]^{* * *}} \end{gathered}$ | $\begin{gathered} -9.74565 \\ {[3.53353]^{* * *}} \end{gathered}$ |
| Constant | $\begin{gathered} 1.3957 \\ {[0.31205]^{* * *}} \\ \hline \end{gathered}$ | $\begin{gathered} 4.20446 \\ {[3.15680]} \\ \hline \end{gathered}$ | $\begin{gathered} 1.4961 \\ {[1.05083]} \end{gathered}$ | $\begin{gathered} 4.59122 \\ {[9.03070]} \\ \hline \end{gathered}$ | $\begin{gathered} 1.59236 \\ {[1.00779]} \end{gathered}$ | $\begin{gathered} 5.02575 \\ {[8.96907]} \end{gathered}$ | $\begin{gathered} 1.44662 \\ {[0.37006]^{* * *}} \end{gathered}$ | $\begin{gathered} 7.31738 \\ {[5.53817]} \end{gathered}$ | $\begin{gathered} 2.3512 \\ {[0.80260]^{* * *}} \end{gathered}$ | $\begin{gathered} 16.20704 \\ {[10.17198]} \end{gathered}$ | $\begin{gathered} 2.30761 \\ {[0.77121]^{* * *}} \end{gathered}$ | $\begin{aligned} & 15.10713 \\ & {[9.75853]} \end{aligned}$ |
| Region | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Decade | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Includes Members with Previous Relatives | N | N | N | N | Y | Y | N | N | N | N | Y | Y |
| Observations | 518 | 518 | 506 | 506 | 551 | 551 | 1065 | 1065 | 1047 | 1047 | 1127 | 1127 |
| R -squared | 0.23 | 0.13 | 0.31 | 0.23 | 0.3 | 0.22 | 0.18 | 0.07 | 0.25 | 0.15 | 0.25 | 0.14 |
| F statistic | 50.59 | 22.54 | 63.1 | 69.11 | 87.52 | 82.23 | 81.45 | 63.19 | 107.92 | 41.79 | 148.86 | 23.93 |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets. * significant at 10\%; ** significant at 5\%; *** significant at $1 \%$

Table 15: IV-RD Second stage
Dependent Variable: Postrelative

|  | (1) | (2) | (3) | (4) | (5) | (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2.5\% | 2.5\% | 2.5\% | 5\% | 5\% | 5\% |
| Total tenure | 0.04389 | 0.04008 | 0.04649 | 0.06265 | 0.03874 | 0.04362 |
|  | [0.02056]** | [0.01670]** | [0.01724]*** | [0.02024]*** | [0.01634]** | [0.02629] |
| Total tenure^2 | -0.00412 | -0.00317 | -0.00457 | -0.00677 | -0.00363 | -0.0049 |
|  | [0.00301] | [0.00183]* | [0.00199]** | [0.00281]** | [0.00207]* | [0.00346] |
| Female |  | 0.02296 | -0.07036 |  | -0.00584 | -0.07419 |
|  |  | [0.04431] | [0.08466] |  | [0.03148] | [0.06235] |
| College degree |  | 0.05733 | 0.04972 |  | 0.03995 | 0.03586 |
|  |  | [0.01884]*** | [0.01838]*** |  | [0.01574]** | [0.01550]** |
| Outsider |  | 0.01515 | 0.01417 |  | -0.00893 | -0.0113 |
|  |  | [0.02406] | [0.02365] |  | [0.01731] | [0.01549] |
| Previous public office |  | 0.01238 | -0.00395 |  | -0.0081 | -0.00387 |
|  |  | [0.01938] | [0.02151] |  | [0.01974] | [0.02074] |
| Age at entry |  | -0.00091 | -0.00115 |  | -0.00134 | -0.00214 |
|  |  | [0.00137] | [0.00135] |  | [0.00111] | [0.00137] |
| Age at death |  | 0.0004 | 0.00067 |  | 0.00079 | 0.00094 |
|  |  | [0.00109] | [0.00102] |  | [0.00074] | [0.00089] |
| Military |  | 0.00023 | -0.01702 |  | 0.02081 | 0.01502 |
|  |  | [0.02132] | [0.02411] |  | [0.01631] | [0.01629] |
| Farmer |  | 0.02856 | 0.04378 |  | -0.00764 | -0.00691 |
|  |  | [0.04984] | [0.05355] |  | [0.03467] | [0.03568] |
| Lawyer |  | 0.07741 | 0.07252 |  | 0.00728 | 0.0049 |
|  |  | [0.04232]* | [0.04210]* |  | [0.03106] | [0.03544] |
| Business |  | 0.11033 | 0.10067 |  | 0.01313 | 0.00111 |
|  |  | [0.04282]** | [0.04473]** |  | [0.02985] | [0.03441] |
| Prerelative |  |  | 0.12829 |  |  | 0.1552 |
|  |  |  | [0.07201]* |  |  | [0.04828]*** |
| Constant | -0.02254 | -0.14825 | -0.11686 | -0.03573 | -0.04263 | 0.00393 |
|  | [0.04935] | [0.06506]** | [0.08224] | [0.03402] | [0.05987] | [0.07102] |
| Region | Y | Y | Y | Y | Y | Y |
| Decade | Y | Y | Y | Y | Y | Y |
| Includes Members with | N | N | Y | N | N | Y |
| Previous Relatives | N | N | Y | N | N | Y |
| TE(2-1) | 0.03153 | 0.03057 | 0.03278 | 0.04234 | 0.02785 | 0.02892 |
| TE(2-1) p-value | 0.0196 | 0.0166 | 0.0136 | 0.0014 | 0.0117 | 0.0844 |
| Observations | 518 | 506 | 551 | 1065 | 1047 | 1127 |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets
TE(2-1): marginal impact on Postrelative of a total tenure of two terms versus one term

* significant at 10\%; ** significant at 5\%;*** significant at $1 \%$

Table 16: IV First stage - large windows

|  | Dependent Variable: Longterm |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
|  | 25\% | 25\% | 25\% | 25\% | 40\% | 40\% |
| Win | 0.79903 | 0.61653 | 0.61233 | 0.61633 | 0.81931 | 0.63553 |
|  | $[0.05702]^{\star * *}[0.12186]^{* * *}[0.11532]^{* * *}[0.11800]^{* * *}[0.04735]^{* * *}[0.11639]^{* * *}$ |  |  |  |  |  |
| Female*(1-Win) | -0.02087 |  | -0.01643 | 0.02805 |  | -0.02881 |
|  | [0.15393] |  | [0.15376] | [0.15530] |  | [0.15354] |
| College degree*(1-Win) | [0.02479]* |  | 0.04312 | 0.02182 |  | 0.04749 |
|  |  |  | [0.02435]* | [0.03032] |  | [0.02213]** |
| Outsider*(1-Win) | $\begin{gathered} 0.0039 \\ {[0.02535]} \end{gathered}$ |  | $\begin{gathered} -0.00692 \\ {[0.02501]} \end{gathered}$ | 0.01159 |  | -0.00573 |
|  |  |  | [0.03176]-0.02243 |  | [0.02557] |
| Previous public office*(1-Win) | $-0.00114$ |  |  |  | -0.01717 | 0.0019 |
|  | [0.03426] |  | [0.03270] | [0.03318] |  | [0.03380] |
| Age at entry*(1-Win) | -0.007 |  | -0.00619 | -0.00652 |  | $\begin{gathered} -0.00673 \\ {[0.00178]^{\star * *}} \end{gathered}$ |
|  |  |  | [0.00184]*** | [0.00184]*** |  |  |
| Age at death*(1-Win) | $0.00181$ |  | 0.00168 | 0.00211 |  | $\begin{gathered} 0.00187 \\ {[0.00113]} \end{gathered}$ |
|  |  | [0.00108] | [0.00102] | -0.02141 |  |  |
| Military*(1-Win) | -0.01028$[0.02851]$ |  | -0.01155 |  |  | -0.01219 |
|  |  |  | [0.02789] | [0.02620] |  | [0.02569] |
| Farmer*(1-Win) | [0.02851]-0.02759 |  | -0.00965 | -0.04892 |  | -0.05809 |
|  | $\begin{gathered} -0.02759 \\ {[0.07866]} \end{gathered}$ |  | [0.07747] | [0.08458] |  | [0.07530] |
| Lawyer*(1-Win) | -0.03565 <br> [0.05404] |  | $\begin{gathered} -0.03083 \\ {[0.05226]} \end{gathered}$ | $\begin{gathered} -0.04182 \\ {[0.04743]} \end{gathered}$ |  | $\begin{aligned} & -0.05588 \\ & {[0.05357]} \end{aligned}$ |
|  |  |  |  |  |  |
| Business*(1-Win) | $\begin{gathered} -0.00991 \\ {[0.06924]} \end{gathered}$ |  |  | $\begin{gathered} -0.0082 \\ {[0.06660]} \end{gathered}$ | $\begin{gathered} -0.01791 \\ {[0.06536]} \end{gathered}$ |  | $\begin{gathered} -0.01894 \\ {[0.07036]} \end{gathered}$ |
|  |  |  |  |  |  |  |  |
| Prerelative*(1-Win) | -0.06206 [0.065 |  |  |  |  |  |  |
|  |  |  | [0.04538] |  |  |  |  |
| Constant | $\begin{array}{cc} 0.20097 & 0.38347 \\ {[0.05702]^{* * *}} & {[0.12186]^{* * *}} \end{array}$ |  | 0.38767 | 0.38367 | 0.18069 | $\begin{gathered} 0.36447 \\ {[0.11639]^{* * *}} \end{gathered}$ |  |
|  |  |  | [0.11532]*** | [0.11800]*** | [0.04735]** |  |  |
| Region | [10.0. |  | Y | N | Y | Y |  |
| Decade | Y | Y |  | N | Y | Y |  |
| Margin of votes quartic | Y | Y | Y | N | N | Y |  |
| Previous Relatives | N | N | Y |  |  | N |  |
|  |  |  |  |  |  |  |  |
| State | NN | N | N | Y | N | N |  |
| Year |  | N | N | Y | N | N |  |
| Observations | N 3095 | 3034 | $\begin{gathered} 3295 \\ 0.78 \\ 17234.85 \end{gathered}$ | 30340.81 | $\begin{gathered} 3605 \\ 0.78 \\ 2790 \end{gathered}$ | 3537 |  |
| R-squared | $\begin{gathered} 0.77 \\ 2134.44 \end{gathered}$ | $\begin{gathered} 0.77 \\ 9427.11 \end{gathered}$ |  |  |  | 0.7810522.46 |  |
| F statistic |  |  |  | 11678.95 |  |  |  |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets.

* significant at 10\%; ** significant at 5\%;*** significant at $1 \%$

Table 17: IV-RD Second stage - large windows
Dependent Variable: Postrelative

|  | $\begin{array}{r} (1) \\ 25 \% \\ \hline \end{array}$ | $\begin{array}{r} (2) \\ \text { 25\% } \\ \hline \end{array}$ | $\begin{array}{r} (3) \\ 25 \% \\ \hline \end{array}$ | $\begin{gathered} (4) \\ 25 \% \\ \hline \end{gathered}$ | $\begin{gathered} (5) \\ 25 \% \\ \hline \end{gathered}$ | $\begin{gathered} (6) \\ 40 \% \\ \hline \end{gathered}$ | $\begin{gathered} (7) \\ 40 \% \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Longterm | $\begin{gathered} 0.06428 \\ {[0.02092]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.06244 \\ {[0.02144]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.05028 \\ {[0.02590]^{*}} \end{gathered}$ | $\begin{gathered} 0.05425 \\ {[0.02378]^{* *}} \end{gathered}$ | $\begin{gathered} 0.04669 \\ {[0.01572]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.05154 \\ {[0.02179]^{* *}} \end{gathered}$ | $\begin{gathered} 0.04661 \\ {[0.02025]^{* *}} \end{gathered}$ |
| Female |  | $\begin{gathered} 0.05354 \\ {[0.06678]} \end{gathered}$ | $\begin{gathered} 0.0244 \\ {[0.06347]} \end{gathered}$ | $\begin{gathered} 0.02568 \\ {[0.06390]} \end{gathered}$ | $\begin{gathered} 0.04652 \\ {[0.06903]} \end{gathered}$ |  | $\begin{gathered} 0.04601 \\ {[0.05927]} \end{gathered}$ |
| College degree |  | $\begin{gathered} 0.01261 \\ {[0.00895]} \end{gathered}$ | $\begin{gathered} 0.01251 \\ {[0.01013]} \end{gathered}$ | $\begin{gathered} 0.01247 \\ {[0.01008]} \end{gathered}$ | $\begin{gathered} 0.00974 \\ {[0.00862]} \end{gathered}$ |  | $\begin{gathered} 0.01086 \\ {[0.00862]} \end{gathered}$ |
| Outsider |  | $\begin{gathered} -0.00002 \\ {[0.00776]} \end{gathered}$ | $\begin{gathered} -0.00051 \\ {[0.00823]} \end{gathered}$ | $\begin{gathered} -0.00054 \\ {[0.00824]} \end{gathered}$ | $\begin{gathered} 0.00284 \\ {[0.00698]} \end{gathered}$ |  | $\begin{gathered} 0.00104 \\ {[0.00649]} \end{gathered}$ |
| Previous public office |  | $\begin{gathered} 0.00405 \\ {[0.00798]} \end{gathered}$ | $\begin{gathered} 0.00513 \\ {[0.00838]} \end{gathered}$ | $\begin{gathered} 0.00509 \\ {[0.00837]} \end{gathered}$ | $\begin{gathered} -0.00139 \\ {[0.00868]} \end{gathered}$ |  | $\begin{gathered} 0.00002 \\ {[0.00826]} \end{gathered}$ |
| Age at entry |  | $\begin{gathered} 0.00035 \\ {[0.00044]} \end{gathered}$ | $\begin{gathered} 0.00017 \\ {[0.00048]} \end{gathered}$ | $\begin{gathered} 0.00016 \\ {[0.00049]} \end{gathered}$ | $\begin{gathered} 0.00035 \\ {[0.00046]} \end{gathered}$ |  | $\begin{gathered} 0.0001 \\ {[0.00038]} \end{gathered}$ |
| Age at death |  | $\begin{gathered} -0.00007 \\ {[0.00039]} \end{gathered}$ | $\begin{gathered} 0.00001 \\ {[0.00042]} \end{gathered}$ | $\begin{gathered} 0.00002 \\ {[0.00042]} \end{gathered}$ | $\begin{gathered} -0.00003 \\ {[0.00035]} \end{gathered}$ |  | $\begin{aligned} & -0.00026 \\ & {[0.00037]} \end{aligned}$ |
| Military |  | $\begin{gathered} 0.00124 \\ {[0.00914]} \end{gathered}$ | $\begin{gathered} -0.00874 \\ {[0.00942]} \end{gathered}$ | $\begin{gathered} -0.00891 \\ {[0.00939]} \end{gathered}$ | $\begin{gathered} -0.00129 \\ {[0.00864]} \end{gathered}$ |  | $\begin{aligned} & -0.00028 \\ & {[0.00806]} \end{aligned}$ |
| Farmer |  | $\begin{gathered} -0.01667 \\ {[0.02462]} \end{gathered}$ | $\begin{gathered} -0.01936 \\ {[0.02303]} \end{gathered}$ | $\begin{gathered} -0.01872 \\ {[0.02313]} \end{gathered}$ | $\begin{gathered} -0.01809 \\ {[0.02549]} \end{gathered}$ |  | $\begin{gathered} -0.01933 \\ {[0.02122]} \end{gathered}$ |
| Lawyer |  | $\begin{gathered} 0.00569 \\ {[0.01686]} \end{gathered}$ | $\begin{gathered} 0.00172 \\ {[0.01711]} \end{gathered}$ | $\begin{gathered} 0.0015 \\ {[0.01722]} \end{gathered}$ | $\begin{gathered} 0.00915 \\ {[0.01649]} \end{gathered}$ |  | $\begin{gathered} 0.00683 \\ {[0.01386]} \end{gathered}$ |
| Business |  | $\begin{gathered} 0.00656 \\ {[0.01498]} \end{gathered}$ | $\begin{aligned} & -0.00028 \\ & {[0.01664]} \end{aligned}$ | $\begin{gathered} -0.00025 \\ {[0.01671]} \end{gathered}$ | $\begin{gathered} 0.00964 \\ {[0.01390]} \end{gathered}$ |  | $\begin{gathered} 0.00809 \\ {[0.01266]} \end{gathered}$ |
| Prerelative |  |  | $\begin{gathered} 0.12522 \\ {[0.02491]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.1586 \\ {[0.04298]^{\star * *}} \end{gathered}$ |  |  |  |
| Longterm*Prerelative |  |  |  | $\begin{aligned} & -0.04286 \\ & {[0.05414]} \end{aligned}$ |  |  |  |
| Constant | $\begin{gathered} 0.00378 \\ {[0.01795]} \\ \hline \end{gathered}$ | $\begin{array}{r} -0.02199 \\ {[0.03033]} \\ \hline \end{array}$ | $\begin{gathered} -0.00047 \\ {[0.04052]} \\ \hline \end{gathered}$ | $\begin{array}{r} -0.00301 \\ {[0.04026]} \\ \hline \end{array}$ | $\begin{array}{r} -0.05288 \\ {[0.03321]} \\ \hline \end{array}$ | $\begin{gathered} 0.01557 \\ {[0.01973]} \\ \hline \end{gathered}$ | $\begin{gathered} 0.02078 \\ {[0.03417]} \end{gathered}$ |
| Region | Y | Y | Y | Y | N | Y | Y |
| Decade | Y | Y | Y | Y | N | Y | Y |
| Margin of votes quartic | Y | Y | Y | Y | Y | Y | Y |
| Includes Members with Previous Relatives | N | N | Y | Y | N | N | N |
| State | N | N | N | N | Y | N | N |
| Year | N | N | N | N | Y | N | N |
| Observations | 3095 | 3034 | 3295 | 3295 | 3034 | 3605 | 3537 |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets.

* significant at 10\%; ** significant at 5\%;*** significant at $1 \%$

Table 18: IV-RD First stage - large windows

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 25\% |  | 25\% |  | 25\% |  | 25\% |  | 40\% |  | 40\% |  |
|  | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 |
| Win | $\begin{gathered} 1.12002 \\ {[0.30023]^{* * *}} \end{gathered}$ | $\begin{gathered} \hline 3.33391 \\ {[3.18625]} \end{gathered}$ | $\begin{gathered} \hline 1.04425 \\ {[1.06768]} \end{gathered}$ | $\begin{gathered} \hline-2.88729 \\ {[15.42783]} \end{gathered}$ | $\begin{gathered} 1.19229 \\ {[1.00530]} \end{gathered}$ | $\begin{gathered} 0.0549 \\ {[14.53174]} \end{gathered}$ | $\begin{gathered} 0.51033 \\ {[1.27449]} \end{gathered}$ | $\begin{gathered} \hline-8.20437 \\ {[18.03092]} \end{gathered}$ | $\begin{gathered} 0.94211 \\ {[0.32513]^{* * *}} \end{gathered}$ | $\begin{gathered} \hline-0.88898 \\ {[4.58743]} \end{gathered}$ | $\begin{gathered} 0.4789 \\ {[0.90433]} \end{gathered}$ | $\begin{gathered} -10.64449 \\ {[12.12421]} \end{gathered}$ |
| Female*(1-Win) |  |  | $\begin{gathered} 0.92848 \\ {[0.75933]} \end{gathered}$ | $\begin{gathered} 19.5052 \\ {[10.14804]^{\star}} \end{gathered}$ | $\begin{gathered} 1.40967 \\ {[0.69656]^{* *}} \end{gathered}$ | $\begin{gathered} 22.91289 \\ {[8.42555]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.91441 \\ {[1.04060]} \end{gathered}$ | $\begin{gathered} -8.47021 \\ {[14.02170]} \end{gathered}$ |  |  | $\begin{gathered} 0.66582 \\ {[0.71404]} \end{gathered}$ | 13.88848 $[9.28755]$ |
| College degree*(1-Win) |  |  | $\begin{gathered} 0.10332 \\ {[0.13182]} \end{gathered}$ | $\begin{gathered} 0.21104 \\ {[1.94227]} \end{gathered}$ | $\begin{gathered} 0.13719 \\ {[0.12502]} \end{gathered}$ | $\begin{gathered} 1.03087 \\ {[1.93594]} \end{gathered}$ | $\begin{gathered} -0.55806 \\ {[0.18957]^{* * *}} \end{gathered}$ | $\begin{gathered} -7.90334 \\ {[2.68442]^{* * *}} \end{gathered}$ |  |  | $\begin{gathered} 0.04939 \\ {[0.10712]} \end{gathered}$ | $\begin{gathered} -0.23922 \\ {[1.55552]} \end{gathered}$ |
| Outsider*(1-Win) |  |  | $\begin{gathered} 0.04393 \\ {[0.19837]} \end{gathered}$ | $\begin{gathered} 1.19729 \\ {[2.99195]} \end{gathered}$ | $\begin{gathered} 0.00174 \\ {[0.18422]} \end{gathered}$ | $\begin{gathered} 0.71249 \\ {[2.80373]} \end{gathered}$ | $\begin{gathered} 0.12279 \\ {[0.18463]} \end{gathered}$ | $\begin{gathered} 1.66126 \\ {[2.39974]} \end{gathered}$ |  |  | $\begin{gathered} -0.09507 \\ {[0.19408]} \end{gathered}$ | $\begin{gathered} -0.75447 \\ {[2.73228]} \end{gathered}$ |
| Previous public office*(1-Win) |  |  | $\begin{gathered} -0.35738 \\ {[0.23893]} \end{gathered}$ | $\begin{gathered} -5.45879 \\ {[3.26835]} \end{gathered}$ | $\begin{gathered} -0.4624 \\ {[0.22754]^{\star *}} \end{gathered}$ | $\begin{gathered} -6.42205 \\ {[3.03956]^{* *}} \end{gathered}$ | $\begin{gathered} -0.46656 \\ {[0.23406]^{\star}} \end{gathered}$ | $\begin{gathered} -6.46503 \\ {[3.05024]^{* *}} \end{gathered}$ |  |  | $\begin{gathered} -0.32983 \\ {[0.23424]} \end{gathered}$ | $\begin{gathered} -4.77777 \\ {[3.07280]} \end{gathered}$ |
| Age at entry*(1-Win) |  |  | $\begin{gathered} 0.03657 \\ {[0.01281]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.79053 \\ {[0.21829]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.04194 \\ {[0.01220]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.85544 \\ {[0.21590]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.01781 \\ {[0.01266]} \end{gathered}$ | $\begin{gathered} 0.56789 \\ {[0.21160]^{* * *}} \end{gathered}$ |  |  | $\begin{gathered} 0.04507 \\ {[0.01188]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.91587 \\ {[0.20507]^{* * *}} \end{gathered}$ |
| Age at death*(1-Win) |  |  | $\begin{gathered} -0.03231 \\ {[0.00865]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.68966 \\ {[0.14965]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.03136 \\ {[0.00828]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.66385 \\ {[0.14680]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.04145 \\ {[0.00912]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.81812 \\ {[0.15976]^{* * *}} \end{gathered}$ |  |  | $\begin{gathered} -0.0396 \\ {[0.00789]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.77991 \\ {[0.13937]^{* * *}} \end{gathered}$ |
| Military*(1-Win) |  |  | $\begin{gathered} -0.0896 \\ {[0.18837]} \end{gathered}$ | $\begin{gathered} -1.38218 \\ {[3.27875]} \end{gathered}$ | $\begin{gathered} -0.0914 \\ {[0.18125]} \end{gathered}$ | $\begin{gathered} -1.15266 \\ {[3.12115]} \end{gathered}$ | $\begin{gathered} -0.19128 \\ {[0.21971]} \end{gathered}$ | $\begin{gathered} -2.21984 \\ {[3.36035]} \end{gathered}$ |  |  | $\begin{gathered} -0.03411 \\ {[0.17054]} \end{gathered}$ | $\begin{gathered} -0.62992 \\ {[2.91888]} \end{gathered}$ |
| Farmer*(1-Win) |  |  | $\begin{gathered} 1.28372 \\ {[0.58780]^{\star \star}} \end{gathered}$ | $\begin{gathered} 17.01584 \\ {[9.83604]^{*}} \end{gathered}$ | $\begin{gathered} 1.39736 \\ {[0.55086]^{* *}} \end{gathered}$ | $\begin{gathered} 17.68231 \\ {[9.33838]^{\star}} \end{gathered}$ | $\begin{gathered} 1.78375 \\ {[0.64861]^{* * *}} \end{gathered}$ | $\begin{gathered} 24.15491 \\ {[10.51682]^{* *}} \end{gathered}$ |  |  | $\begin{gathered} 1.19345 \\ {[0.57410]^{* *}} \end{gathered}$ | $\begin{gathered} 16.76935 \\ {[9.08138]^{\star}} \end{gathered}$ |
| Lawyer*(1-Win) |  |  | $\begin{gathered} 0.7956 \\ {[0.47761]} \end{gathered}$ | $\begin{gathered} 11.4737 \\ {[9.00211]} \end{gathered}$ | $\begin{gathered} 0.86948 \\ {[0.46468]^{\star}} \end{gathered}$ | $\begin{gathered} 11.9149 \\ {[8.73447]} \end{gathered}$ | $\begin{gathered} 1.64754 \\ {[0.53926]^{* * *}} \end{gathered}$ | $\begin{gathered} 22.87222 \\ {[9.81558]^{* *}} \end{gathered}$ |  |  | $\begin{gathered} 0.60765 \\ {[0.48160]} \end{gathered}$ | $\begin{gathered} 9.54785 \\ {[8.23452]} \end{gathered}$ |
| Business*(1-Win) |  |  | $\begin{gathered} 0.84773 \\ {[0.48871]^{*}} \end{gathered}$ | $\begin{aligned} & 11.12923 \\ & {[9.13164]} \end{aligned}$ | $\begin{gathered} 0.95854 \\ {[0.47324]^{\star \star}} \end{gathered}$ | $\begin{aligned} & 12.43353 \\ & {[8.83351]} \end{aligned}$ | $\begin{gathered} 1.47012 \\ {[0.54948]^{* *}} \end{gathered}$ | $\begin{gathered} 19.28411 \\ {[9.76624]^{*}} \end{gathered}$ |  |  | $\begin{gathered} 0.70488 \\ {[0.49519]} \end{gathered}$ | $\begin{gathered} 9.88851 \\ {[8.24582]} \end{gathered}$ |
| Prerelative*(1-Win) |  |  |  |  | $\begin{gathered} -0.09516 \\ {[0.30175]} \end{gathered}$ | $\begin{gathered} -0.77686 \\ {[4.52873]} \end{gathered}$ |  |  |  |  |  |  |
| Female |  |  | $\begin{gathered} -1.35529 \\ {[0.69797]^{*}} \end{gathered}$ | $\begin{gathered} -24.40739 \\ {[9.97567]^{* *}} \end{gathered}$ | $\begin{gathered} -1.80573 \\ {[0.59275]^{* * *}} \end{gathered}$ | $\begin{gathered} -27.51341 \\ {[8.25808]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.01088 \\ {[0.90207]} \end{gathered}$ | $\begin{gathered} -7.05415 \\ {[11.28379]} \end{gathered}$ |  |  | $\begin{gathered} -1.1617 \\ {[0.67219]^{*}} \end{gathered}$ | $\begin{gathered} -19.50442 \\ {[9.21990]^{* *}} \end{gathered}$ |
| College degree |  |  | $\begin{gathered} 0.05566 \\ {[0.11182]} \end{gathered}$ | $\begin{gathered} 0.86696 \\ {[1.86618]} \end{gathered}$ | $\begin{gathered} 0.03237 \\ {[0.10772]} \end{gathered}$ | $\begin{gathered} 0.18584 \\ {[1.88530]} \end{gathered}$ | $\begin{gathered} 0.6019 \\ {[0.13589]^{* * *}} \end{gathered}$ | $\begin{gathered} 7.78092 \\ {[2.29553]^{* * *}} \end{gathered}$ |  |  | $\begin{gathered} 0.14139 \\ {[0.09850]} \end{gathered}$ | $\begin{gathered} 1.61836 \\ {[1.57842]} \end{gathered}$ |
| Outsider |  |  | $\begin{gathered} -0.01284 \\ {[0.12755]} \end{gathered}$ | $\begin{gathered} -0.92412 \\ {[2.44334]} \end{gathered}$ | $\begin{gathered} -0.01586 \\ {[0.12365]} \end{gathered}$ | $\begin{gathered} -0.84388 \\ {[2.31839]} \end{gathered}$ | $\begin{gathered} -0.1612 \\ {[0.12134]} \end{gathered}$ | $\begin{gathered} -2.48309 \\ {[1.97521]} \end{gathered}$ |  |  | $\begin{gathered} 0.11924 \\ {[0.12057]} \end{gathered}$ | $\begin{gathered} 1.12285 \\ {[2.16540]} \end{gathered}$ |

Table 18 Continued: IV-RD First Stage - large windows

|  | (1) $25 \%$ |  | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 25\% |  | 25\% |  | 25\% |  | 40\% |  | 40\% |  |
|  | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure^2 | Total tenure | Total tenure ${ }^{\wedge}$ 2 |
| Previous public office |  |  | $\begin{gathered} 0.46234 \\ {[0.11253]^{* * *}} \end{gathered}$ | $\begin{gathered} 6.82349 \\ {[1.50055]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.4998 \\ {[0.10854]^{* * *}} \end{gathered}$ | $\begin{gathered} 7.30712 \\ {[1.43852]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.40571 \\ {[0.14264]^{* * *}} \end{gathered}$ | $\begin{gathered} 5.84932 \\ {[1.78927]^{* * *}} \end{gathered}$ |  |  | $\begin{gathered} 0.42784 \\ {[0.11459]^{* * *}} \end{gathered}$ | $\begin{gathered} 6.04679 \\ {[1.63251]^{\star * *}} \end{gathered}$ |
| Age at entry |  |  | $\begin{gathered} -0.0825 \\ {[0.00805]^{* * *}} \end{gathered}$ | $\begin{gathered} -1.33253 \\ {[0.16998]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.08388 \\ {[0.00829]^{* * *}} \end{gathered}$ | $\begin{gathered} -1.35478 \\ {[0.17506]^{* * *}} \end{gathered}$ | $\begin{gathered} -0.0628 \\ {[0.00798]^{\star \star *}} \end{gathered}$ | $\begin{gathered} -1.09115 \\ {[0.16226]^{* * *}} \end{gathered}$ |  |  | $\begin{gathered} -0.08828 \\ {[0.00753]^{\star * *}} \end{gathered}$ | $\begin{gathered} -1.42257 \\ {[0.15876]^{\star \star *}} \end{gathered}$ |
| Age at death |  |  | $\begin{gathered} 0.05473 \\ {[0.00793]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.97525 \\ {[0.15184]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.05229 \\ {[0.00785]^{\star \star *}} \end{gathered}$ | $\begin{gathered} 0.93218 \\ {[0.15047]^{\star * *}} \end{gathered}$ | $\begin{gathered} 0.0665 \\ {[0.00825]^{\star \star *}} \end{gathered}$ | $\begin{gathered} 1.12853 \\ {[0.16129]^{\star * *}} \end{gathered}$ |  |  | $\begin{gathered} 0.06036 \\ {[0.00701]^{* * *}} \end{gathered}$ | $\begin{gathered} 1.04288 \\ {[0.13977]^{* * *}} \end{gathered}$ |
| Military |  |  | $\begin{gathered} 0.07414 \\ {[0.11777]} \end{gathered}$ | $\begin{gathered} 1.61234 \\ {[2.52643]} \end{gathered}$ | $\begin{gathered} 0.06902 \\ {[0.11365]} \end{gathered}$ | $\begin{gathered} 1.30025 \\ {[2.35266]} \end{gathered}$ | $\begin{gathered} 0.16762 \\ {[0.13830]} \end{gathered}$ | $\begin{gathered} 2.88342 \\ {[2.30482]} \end{gathered}$ |  |  | $\begin{gathered} 0.04199 \\ {[0.09730]} \end{gathered}$ | $\begin{gathered} 1.144 \\ {[2.13886]} \end{gathered}$ |
| Farmer |  |  | $\begin{gathered} -1.18179 \\ {[0.46817]^{* *}} \end{gathered}$ | $\begin{gathered} -16.2942 \\ {[8.94043]^{*}} \end{gathered}$ | $\begin{gathered} -1.23419 \\ {[0.44454]^{\star * *}} \end{gathered}$ | $\begin{gathered} -16.57487 \\ {[8.54781]^{*}} \end{gathered}$ | $\begin{gathered} -1.72143 \\ {[0.48422]^{* * *}} \end{gathered}$ | $\begin{gathered} -23.70934 \\ {[9.12760]^{\star *}} \end{gathered}$ |  |  | $\begin{gathered} -1.21722 \\ {[0.42558]^{* * *}} \end{gathered}$ | $\begin{gathered} -16.93752 \\ {[8.00515]^{* *}} \end{gathered}$ |
| Lawyer |  |  | $\begin{gathered} -0.75476 \\ {[0.41298]^{*}} \end{gathered}$ | $\begin{aligned} & -10.48146 \\ & {[8.39051]} \end{aligned}$ | $\begin{gathered} -0.82566 \\ {[0.40086]^{* *}} \end{gathered}$ | $\begin{aligned} & -10.96774 \\ & {[8.11800]} \end{aligned}$ | $\begin{gathered} -1.56607 \\ {[0.45133]^{* * *}} \end{gathered}$ | $\begin{gathered} -21.25185 \\ {[8.83872]^{\star *}} \end{gathered}$ |  |  | $\begin{gathered} -0.68838 \\ {[0.36447]^{*}} \end{gathered}$ | $\begin{gathered} -9.65186 \\ {[7.35326]} \end{gathered}$ |
| Business |  |  | $\begin{gathered} -0.68735 \\ {[0.41163]} \end{gathered}$ | $\begin{gathered} -9.06667 \\ {[8.38764]} \end{gathered}$ | $\begin{gathered} -0.77162 \\ {[0.39750]^{*}} \end{gathered}$ | $\begin{aligned} & -10.08823 \\ & {[8.09490]} \end{aligned}$ | $\begin{gathered} -1.27576 \\ {[0.43788]^{* * *}} \end{gathered}$ | $\begin{gathered} -16.94754 \\ {[8.84076]^{*}} \end{gathered}$ |  |  | $\begin{gathered} -0.66748 \\ {[0.36932]^{\star}} \end{gathered}$ | $\begin{gathered} -9.07383 \\ {[7.21795]} \end{gathered}$ |
| Prerelative |  |  |  |  | $\begin{gathered} -0.11535 \\ {[0.21605]} \end{gathered}$ | $\begin{aligned} & -1.15917 \\ & {[3.99911]} \end{aligned}$ |  |  |  |  |  |  |
| Constant | $\begin{gathered} 1.5023 \\ {[0.23154]^{\star * *}} \\ \hline \end{gathered}$ | $\begin{gathered} 5.1262 \\ {[2.35501]^{\star *}} \\ \hline \end{gathered}$ | $\begin{gathered} 1.76935 \\ {[0.45416]^{* * *}} \\ \hline \end{gathered}$ | $\begin{gathered} 6.85696 \\ {[4.84678]} \\ \hline \end{gathered}$ | $\begin{gathered} 1.72701 \\ {[0.40923]^{\star * *}} \\ \hline \end{gathered}$ | $\begin{gathered} 6.1971 \\ {[4.43035]} \\ \hline \end{gathered}$ | $\begin{gathered} 1.73492 \\ {[0.65027]^{\star *}} \\ \hline \end{gathered}$ | $\begin{gathered} 4.9365 \\ {[7.69299]} \\ \hline \end{gathered}$ | $\begin{gathered} 1.51652 \\ {[0.23795]^{\star * *}} \\ \hline \end{gathered}$ | $\begin{gathered} 6.4568 \\ {[2.91926]^{\star *}} \\ \hline \end{gathered}$ | $\begin{gathered} 1.87354 \\ {[0.46880]^{\star * *}} \\ \hline \end{gathered}$ | $\begin{gathered} 8.99958 \\ {[4.80306]^{*}} \\ \hline \end{gathered}$ |
| Region | Y | Y | Y | Y | Y | Y | N | N | Y | Y | Y | Y |
| Decade | Y | Y | Y | Y | Y | Y | N | N | Y | Y | Y | Y |
| Margin of Votes quartic | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Includes Members with Previous Relatives | N | N | N | N | Y | Y | N | N | N | N | N | N |
| State | N | N | N | N | N | N | Y | Y | N | N | N | N |
| Year | N | N | N | N | N | N | Y | Y | N | N | N | N |
| Observations | 3095 | 3095 | 3034 | 3034 | 3295 | 3295 | 3034 | 3034 | 3605 | 3605 | 3537 | 3537 |
| R-squared | 0.24 | 0.11 | 0.3 | 0.17 | 0.3 | 0.17 | 0.27 | 0.15 | 0.26 | 0.12 | 0.33 | 0.19 |
| F statistic | 26.66 | 13.57 | 37.6 | 24.99 | 49.04 | 25.3 | 250000 | 11571.8 | 37.51 | 34.66 | 54.55 | 42.93 |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets. * significant at 10\%; ** significant at 5\%; *** significant at 1\%

Table 19: IV-RD Second stage - large windows
Dependent Variable: Postrelative

|  | $\begin{gathered} (1) \\ 25 \% \end{gathered}$ | $\begin{gathered} (2) \\ 25 \% \end{gathered}$ | $\begin{array}{r} (3) \\ 25 \% \\ \hline \end{array}$ | $\begin{gathered} (4) \\ 25 \% \end{gathered}$ | $\begin{array}{r} (5) \\ 25 \% \\ \hline \end{array}$ | $\begin{gathered} (6) \\ 40 \% \end{gathered}$ | $\begin{gathered} (7) \\ 40 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total tenure | $\begin{gathered} 0.04981 \\ {[0.01673]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.0334 \\ {[0.01372]^{* *}} \end{gathered}$ | $\begin{gathered} 0.02905 \\ {[0.01688]^{*}} \end{gathered}$ | $\begin{gathered} 0.0303 \\ {[0.01560]^{*}} \end{gathered}$ | $\begin{gathered} 0.02428 \\ {[0.01166]^{* *}} \end{gathered}$ | $\begin{gathered} 0.03942 \\ {[0.01692]^{* *}} \end{gathered}$ | $\begin{gathered} 0.02231 \\ {[0.01157]^{*}} \end{gathered}$ |
| Total tenure^2 | $\left[\begin{array}{c} -0.00414 \\ {[0.00149]^{* * *}} \end{array}\right.$ | $\begin{gathered} -0.00224 \\ {[0.00111]^{* *}} \end{gathered}$ | $\begin{gathered} -0.00217 \\ {[0.00143]} \end{gathered}$ | $\begin{gathered} -0.00229 \\ {[0.00134]^{*}} \end{gathered}$ | $\begin{gathered} -0.00182 \\ {[0.00092]^{*}} \end{gathered}$ | $\begin{gathered} -0.00376 \\ {[0.00147] * *} \end{gathered}$ | $\begin{gathered} -0.00194 \\ {[0.00087]^{* *}} \end{gathered}$ |
| Female |  | $\begin{gathered} 0.04914 \\ {[0.06253]} \end{gathered}$ | $\begin{gathered} 0.01999 \\ {[0.05911]} \end{gathered}$ | $\begin{gathered} 0.02061 \\ {[0.05887]} \end{gathered}$ | $\begin{gathered} 0.03946 \\ {[0.06644]} \end{gathered}$ |  | $\begin{gathered} 0.03743 \\ {[0.05502]} \end{gathered}$ |
| College degree |  | $\begin{gathered} 0.01258 \\ {[0.00914]} \end{gathered}$ | $\begin{gathered} 0.01203 \\ {[0.01049]} \end{gathered}$ | $\begin{gathered} 0.01211 \\ {[0.01051]} \end{gathered}$ | $\begin{gathered} 0.0096 \\ {[0.00881]} \end{gathered}$ |  | $\begin{gathered} 0.01104 \\ {[0.00868]} \end{gathered}$ |
| Outsider |  | $\begin{gathered} -0.00126 \\ {[0.00812]} \end{gathered}$ | $\begin{gathered} -0.00165 \\ {[0.00832]} \end{gathered}$ | $\begin{aligned} & -0.00191 \\ & {[0.00813]} \end{aligned}$ | $\begin{gathered} 0.00312 \\ {[0.00729]} \end{gathered}$ |  | $\begin{gathered} 0.00053 \\ {[0.00687]} \end{gathered}$ |
| Previous public office |  | $\begin{gathered} 0.00368 \\ {[0.00779]} \end{gathered}$ | $\begin{gathered} 0.00603 \\ {[0.00870]} \end{gathered}$ | $\begin{gathered} 0.00584 \\ {[0.00897]} \end{gathered}$ | $\begin{gathered} -0.0015 \\ {[0.00874]} \end{gathered}$ |  | $\begin{gathered} 0.00145 \\ {[0.00799]} \end{gathered}$ |
| Age at entry |  | $\begin{gathered} 0.00018 \\ {[0.00068]} \end{gathered}$ | $\begin{aligned} & -0.00022 \\ & {[0.00069]} \end{aligned}$ | $\begin{aligned} & -0.00028 \\ & {[0.00069]} \end{aligned}$ | $\begin{gathered} 0.00007 \\ {[0.00058]} \end{gathered}$ |  | $\begin{aligned} & -0.00055 \\ & {[0.00067]} \end{aligned}$ |
| Age at death |  | $\begin{gathered} 0.00017 \\ {[0.00049]} \end{gathered}$ | $\begin{gathered} 0.00038 \\ {[0.00049]} \end{gathered}$ | $\begin{gathered} 0.00043 \\ {[0.00050]} \end{gathered}$ | $\begin{gathered} 0.00026 \\ {[0.00043]} \end{gathered}$ |  | $\begin{gathered} 0.00026 \\ {[0.00050]} \end{gathered}$ |
| Military |  | $\begin{gathered} 0.0023 \\ {[0.00874]} \end{gathered}$ | $\begin{gathered} -0.00786 \\ {[0.00901]} \end{gathered}$ | $\begin{gathered} -0.00803 \\ {[0.00903]} \end{gathered}$ | $\begin{gathered} -0.00089 \\ {[0.00858]} \end{gathered}$ |  | $\begin{gathered} 0.00095 \\ {[0.00769]} \end{gathered}$ |
| Farmer |  | $\begin{gathered} -0.01674 \\ {[0.02569]} \end{gathered}$ | $\begin{gathered} -0.0209 \\ {[0.02452]} \end{gathered}$ | $\begin{aligned} & -0.02073 \\ & {[0.02481]} \end{aligned}$ | $\begin{gathered} -0.01979 \\ {[0.02684]} \end{gathered}$ |  | $\begin{gathered} -0.02404 \\ {[0.02229]} \end{gathered}$ |
| Lawyer |  | $\begin{gathered} 0.00624 \\ {[0.01785]} \end{gathered}$ | $\begin{gathered} 0.0015 \\ {[0.01824]} \end{gathered}$ | $\begin{gathered} 0.00102 \\ {[0.01842]} \end{gathered}$ | $\begin{gathered} 0.00868 \\ {[0.01699]} \end{gathered}$ |  | $\begin{gathered} 0.00457 \\ {[0.01573]} \end{gathered}$ |
| Business |  | $\begin{gathered} 0.00755 \\ {[0.01568]} \end{gathered}$ | $\begin{gathered} -0.00033 \\ {[0.01726]} \end{gathered}$ | $\begin{gathered} 0.00001 \\ {[0.01778]} \end{gathered}$ | $\begin{gathered} 0.00802 \\ {[0.01421]} \end{gathered}$ |  | $\begin{gathered} 0.00627 \\ {[0.01425]} \end{gathered}$ |
| Prerelative |  |  | $\begin{gathered} 0.12615 \\ {[0.02468]^{* * *}} \end{gathered}$ | $\begin{gathered} 0.11709 \\ {[0.03007]^{* * *}} \end{gathered}$ |  |  |  |
| Prerelative*Total tenure |  |  |  | $\begin{gathered} 0.05075 \\ {[0.07630]} \end{gathered}$ |  |  |  |
| Prerelative*Total tenure^2 |  |  |  | $\begin{gathered} -0.00979 \\ {[0.02365]} \end{gathered}$ |  |  |  |
| Constant | $\begin{array}{r} -0.03229 \\ {[0.02825]} \\ \hline \end{array}$ | $\begin{array}{r} -0.04693 \\ {[0.03545]} \\ \hline \end{array}$ | $\begin{gathered} -0.02364 \\ {[0.04562]} \\ \hline \end{gathered}$ | $\begin{array}{r} -0.02628 \\ {[0.04439]} \\ \hline \end{array}$ | $\begin{array}{r} -0.06578 \\ {[0.03958]} \\ \hline \end{array}$ | $\begin{array}{r} -0.01285 \\ {[0.03282]} \\ \hline \end{array}$ | $\begin{gathered} 0.00786 \\ {[0.03823]} \\ \hline \end{gathered}$ |
| Region | Y | Y | Y | Y | N | Y | Y |
| Decade | Y | Y | Y | Y | N | Y | Y |
| Margin of votes quartic | Y | Y | Y | Y | Y | Y | Y |
| Includes Members with Previous Relatives | N | N | Y | N | N | N | N |
| State | N | N | N | N | Y | N | N |
| Year | N | N | N | N | Y | N | N |
| TE(2-1) | 0.03739 | 0.02668 | 0.02254 | 0.02343 | 0.01882 | 0.02814 | 0.01649 |
| TE(2-1) p-value | 0.0046 | 0.0173 | 0.0881 | 0.0557 | 0.0484 | 0.0331 | 0.086 |
| Observations | 3095 | 3034 | 3295 | 3295 | 3034 | 3605 | 3537 |

Sample: Individuals who did not die in office and who were born before 1910
$\mathrm{TE}(2-1)$ is the marginal impact on the chance to have a Postrelative of a total tenure of two terms versus one term Robust standard errors clustered at state level in brackets. * significant at 10\%; ** significant at 5\%; *** significant at 1\%

Table 20: IV-RD estimates for Longterm on each observable at the region-decade level - rolling windows

|  | Window size - margin of $v$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|  | 2.5\% | 5\% | 10\% | 25\% | 40\% | 55\% | 70\% | 85\% | 98\% |
| Postrelative | 0.07995 | 0.05133 | 0.04352 | 0.06279 | 0.0457 | 0.0427 | 0.03628 | 0.03685 | 0.03021 |
|  | [0.06499] | [0.04153] | [0.02601] | [0.02182]*** | [0.02035]** | [0.01547]*** | [0.01535]** | [0.01483]** | [0.01174]** |
| Lawyer | 0.00245 | 0.01926 | 0.02399 | 0.01315 | 0.01886 | 0.01518 | 0.01439 | 0.0171 | 0.0183 |
|  | [0.02687] | [0.03013] | [0.01878] | [0.01514] | [0.01543] | [0.01445] | [0.01404] | [0.01328] | [0.01241] |
| Previous public office | -0.13921 | -0.16214 | -0.15942 | -0.0751 | -0.06215 | -0.03797 | -0.02758 | -0.03022 | -0.02964 |
|  | [0.08105]* | [0.05324]*** | [0.06247]** | [0.03887]* | [0.02976]** | [0.02871] | [0.02522] | [0.02434] | [0.02659] |
| Female | 0.00439 | 0.01287 | 0.00077 | 0.0026 | 0.00599 | 0.00316 | 0.00205 | 0.0014 | -0.00005 |
|  | [0.01732] | [0.01422] | [0.01084] | [0.00745] | [0.00647] | [0.00520] | [0.00466] | [0.00446] | [0.00396] |
| Outsider | 0.07295 | 0.10164 | 0.01957 | -0.05671 | -0.0451 | -0.07267 | -0.05589 | -0.07351 | -0.0638 |
|  | [0.12040] | [0.08714] | [0.08995] | [0.05570] | [0.05083] | [0.04571] | [0.04135] | [0.04027]* | [0.03769]* |
| Age at entry | -0.20201 | 0.60739 | 0.16625 | 0.47087 | 0.21818 | 0.05975 | 0.04388 | -0.04264 | -0.29942 |
|  | [1.71396] | [1.02209] | [0.76202] | [0.56419] | [0.57378] | [0.54186] | [0.56528] | [0.47285] | [0.45359] |
| College graduate | -0.2218 | -0.07546 | -0.11612 | -0.01058 | 0.01645 | 0.04328 | 0.04063 | 0.01915 | 0.01328 |
|  | [0.10237]** | [0.08851] | [0.07317] | [0.04784] | [0.03805] | [0.03221] | [0.03113] | [0.03181] | [0.02785] |
| Military | -0.03016 | -0.00517 | 0.00164 | 0.03332 | 0.0474 | 0.03963 | 0.03769 | 0.02438 | 0.03712 |
|  | [0.13702] | [0.08989] | [0.06760] | [0.03698] | [0.03527] | [0.03697] | [0.03586] | [0.03454] | [0.03381] |
| Farmer | -0.00246 | -0.01365 | -0.00221 | -0.00318 | 0.00053 | 0.00197 | -0.00248 | 0.00244 | 0.0059 |
|  | [0.03015] | [0.02571] | [0.02089] | [0.01581] | [0.01481] | [0.01182] | [0.01163] | [0.01089] | [0.01075] |
| Business | -0.03016 | -0.00517 | 0.00164 | 0.03332 | 0.0474 | 0.03963 | 0.03769 | 0.02438 | 0.03712 |
|  | [0.13702] | [0.08989] | [0.06760] | [0.03698] | [0.03527] | [0.03697] | [0.03586] | [0.03454] | [0.03381] |
| Region | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Decade | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Margin of votes quartic | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Observations | 505 | 1048 | 1807 | 3042 | 3545 | 3774 | 3885 | 3928 | 4041 |

Sample: Individuals without prerelatives who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets. * significant at $10 \%$; ** significant at $5 \%$; *** significant at $1 \%$

Table 21: IV First stage for "external shocks" approach
Dependent Variable: Longterm

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Re-Election Instrument | 0.37946 | 0.3351 | 0.33607 | 0.3315 | 0.33372 |
| Constant | $[.02054]^{\star * *}$ | $[.02198]^{* * *}$ | $[.023]^{* * *}$ | $[.02236]^{\star * *}$ | $[.02326]^{* * *}$ |
|  | 0.54733 | 0.49868 | 0.49785 | 0.50138 | 0.49971 |
| State/Quarter Interaction | $[.11524]^{\star * *}$ | $[.22981]^{* * *}$ | $[.22912]^{\star *}$ | $[.23029]^{\star *}$ | $[.22964]^{* *}$ |
| State/Decade Interaction | N | N | N | N | N |
| Includes Members with | Y | Y | Y | Y | Y |
| Previous Relatives |  | Y | N | Y | N |
| Relatives Only Enter 10 | N | N | N | Y | Y |
| Years or More Later | 7359 | 7359 | 6734 | 7182 | 6639 |
| Observations | 179 | 90 | 98 | 88 | 95 |
| F-Stat | 0.127 | 0.161 | 0.173 | 0.16 | 0.172 |
| R-Squared |  |  |  |  |  |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets.

* significant at 10\%; ** significant at 5\%;*** significant at 1\%

Table 22: IV Second stage for "external shocks" approach

|  | Dependent Variable: Postrelative |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) |
| Longterm | 0.05863 | 0.07286 | 0.03923 | 0.05779 | 0.04374 |
|  | [.02618]** | [.03319]** | [.02874] | [.02734]** | [.02393]* |
| Constant | 0.26487 | 0.19535 | 0.22058 | 0.20666 | 0.21272 |
|  | [.02128]*** | [.02489]*** | [.02156]*** | [.02051]*** | [.01795]*** |
| State/Quarter Interaction | Y | N | N | N | N |
| State/Decade Interaction | N | Y | Y | Y | Y |
| Includes Members with Previous Relatives | Y | Y | N | Y | N |
| Relatives Only Enter 10 Years or More Later | N | N | N | Y | Y |
| Observations | 7359 | 7359 | 6734 | 7182 | 6639 |
| R-Squared | 0.091 | 0.121 | 0.242 | 0.111 | 0.112 |

Sample: Individuals who did not die in office and who were born before 1910
Robust standard errors clustered at state level in brackets.

* significant at 10\%; ** significant at 5\%;*** significant at 1\%

Figure 1: Trends in Congressmen with Relatives


A: Proportion of Leqislators with Relatives

B: Proportion of Leqislators with Previous Relatives

C: Proportion of Leaislators with Posterior Relatives


Figure 2: Trends in Congressmen with Previous Relatives


B: Proportion of Legislators with Previous


C: Proportion of Legislators with Previous


## Figure 3: Impact of Political Competition on Predicted Proportion of Individuals with Previous Relatives in Congress



Note: Political competition is given by an index reflecting the degree to which the state legislature is more or less evenly divided between the two dominant parties at the time a legislator from that state first enters Congress.

## Figure 4: Impact of Total Tenure on the Probability a Legislator has a Posterior Relative



Note: Figure 3B gives the predicted values from specification 10 in Table 5. Values of 10 or greater are replaced with $\geqslant 10$. This is done given the small number of observations greater than 10 .

## Figure 5: The Discontinuous Impact of Victory on Having Posterior Relatives



Sample: Sample includes individuals who did not die in office, born before 1910 and with no prerelatives. Note: Quartic polynomial used for interpolation.

Figure 6: The Impact of the Vote Margin in First Reelection on Long Term and Total Tenure
A: Long Term



Sample: Sample includes individuals who did not die in office, born before 1910 and with no prerelatives. Note: Quartic polynomial interacted with Margin Vote>0 used for interpolation.


[^0]:    ${ }^{1}$ See The Economist article "Meritocracy in America: Ever higher society, ever harder to ascend," December 29th 2004.
    ${ }^{2}$ One concern regarding political dynasties is that inequality in the distribution of political power may reflect imperfections in democratic representation. Conventional wisdom considers that access to resources, key people, or name recognition-rather than merit-boost the chances of a particular person to attain political power. Media articles have reported on why members of the National Congress party thought Sonia Gandhi was a good candidate: "The Congress Party thinks the Gandhi name is a vote winner." ("Rallying the masses," Time South Pacific 09/13/99). In a similar vein, The Economist noted that "The party has better politicians than she but none with her star quality (more an emanation of her pedigree than her personality)." ("Sonia, of course"; 11/18/2000)

[^1]:    ${ }^{3}$ Dal Bó, Foster and Putterman (2007) show in an experimental setting, that given the same rules, subjects behave differently depending on the process through which rules were selected.

[^2]:    ${ }^{4}$ Jones and Olken (2005) show that national leaders appear to have large impacts on national growth. Pande (2003) shows that the group membership of legislators affects targeted redistribution. Chattopadhyay and Duflo (2004) show that the gender of village leaders affects the composition of public goods. Besley, Persson and Sturm (2005) report substantial impacts of governors on the economic performance of states.

[^3]:    ${ }^{5}$ There is also a large theoretical literature on the intergenerational transmission of income (see, inter alia, Becker and Tomes 1979, Loury 1981, Galor and Zeira 1993, Fernández and Rogerson 2001, and Mookherjee and Ray (2003); for a network-based perspective, see Calvó-Armengol and Jackson 2005).

[^4]:    ${ }^{6}$ We only found minor differences among observables between elections that merged and those that did not, save for the fact that elections that did not merge correctly seemed to occur earlier in our sample. This is consistent with the quality of recording being poorer earlier in time. Otherwise the missing elections appear to be random. In our instrumental variables studies we restrict our sample to House elections only. This is done mainly because before 1910 very few Senators were directly elected, but were selected into office by state legislatures. Thus for the most part including them in our sample would add only a few data points and introduce comparability issues.
    ${ }^{7}$ This dataset was generously provided by Rui De Figueiredo and was originally collected by him and

[^5]:    ${ }^{8}$ Sociologists have written extensively on correlations of socioeconomic status (see for instance Ganzeboom et al. 1991). These studies tend to focus on coarse categories (manual workers, say), status, or income rather than on particular occupations. Galor and Tsiddon (1997) offer a theory linking skill premia and intergenerational occupational mobility.

[^6]:    ${ }^{9}$ To see why column (3) can be read this way, consider a matrix where we have the profession of sons in rows and the profession of fathers in columns. Denote the content of cell $(i, j)$ with $F(i, j)$, which captures the fraction of individuals where the son has profession $i$ and the father has profession $j$. Denote with $F^{I}(i, j)=f(i) g(j)$ what that fraction would be if the professions of fathers and sons were selected independently, where $g(j)$ is the fraction of fathers with profession $j$, and $f(i)$ is the fraction of sons with profession $i$. The chance that both son and father will be in profession $i$ relative to what that same chance would be if professions of fathers and sons were selected independently can be calculated as $\frac{F(i, i)}{F^{I}(i, i)}=\frac{F(i, i)}{f(i) g(i)}$. Column (1) reports the magnitude $\frac{F(i, i)}{f(i)}$, column (2) reports the magnitude $g(i)$, and column (3), being the ratio of columns (1) and (2), reports each profession's dynastic bias $\frac{F(i, i)}{f(i) g(i)}$.
    ${ }^{10}$ This is not to say that our measure of dynastic bias is driven by the rarity of the profession. Note that a profession's rarity affects both the numerator and the denominator of its dynastic bias index $\frac{F(i, i)}{f(i) g(i)}$.
    ${ }^{11}$ We used a methodology that takes an extremely conservative position at every step. In fact it yields an estimate indicating that, among fathers, there was a legislator for every four economists. This is clearly a gross overestimation. For example, US universities granted nearly 24, 000 Masters and PhDs in Economics between 1910 and 1952 (Bowen 1953, p. 23), while only 2, 410 legislators were elected in the same period.

[^7]:    ${ }^{12}$ The "year" effects are in fact the years in which each congress was elected, so they are a dummy for every two years corresponding to the same congress. The first one corresponds to the year 1788 (the year in which the 1st congress, which began operations in 1789, was elected). The second one corresponds to the year 1790, etc. For brevity, we refer to congress effects as year effects throughout.
    ${ }^{13}$ A norm in the US Congress has allowed for close relatives like wives to enter Congress and occupy the seat of a legislator who died in office. We exclude these cases wherever appropriate to ensure that the dynastic effects we study do not depend on this obvious form of dynastic transmission.

[^8]:    ${ }^{14}$ A related problem occurs in family firms. Burkart, Panunzi and Shleifer (2003) study a model where firm owners can decide to place a heir as manager, rather than a professional, at the cost of worse managerial performance. Bennedsen et al (2006) estimate that cost to be large using a sample of Danish firms. See also Bertrand and Schoar (2006) and references therein.

[^9]:    ${ }^{15}$ The reason for using this measure instead of the average tenure of a legislator's successors is that each legislator typically has many relatives most of whom will not enter Congress and therefore are not in our data.
    ${ }^{16}$ The use of binary outcome variables would suggest that non-linear maximum likelihood methods would be desirable. However, the consistency of these estimators is dubious in the analysis of panel data; this is the well known incidental parameters problem (see Neyman and Scott, 1948, or Lancaster, 2000). Therefore we focus on the analysis using ordinary least squares; however, the results are robust to using a potentially inconsistent probit estimator.

[^10]:    ${ }^{17}$ Since all winners have Longterm $=1$ and all personal characteristics and fixed effects are interacted with losing, $b_{1}+b_{2}=1$.

[^11]:    ${ }^{18}$ We chose the $25 \%$ window a priori since a large fraction of the observations fall in this interval and data with extreme vote margins seem less reliable. As we will show, the results that follow are not specific to that window.

[^12]:    ${ }^{19}$ The exercise can be explained thus. If, say, the military are much more prevalent among winners (indicating that the assignment may not be random), then the close connection between winning and Longterm should make Longterm as instrumented by Win a significant variable in a model where Military is the dependent variable.
    ${ }^{20}$ Going beyond our default sample, the examination of Prerelatives across winners and losers does suggest an imbalance. Legislators with prerelatives tend to be overrepresented among winners. The regressions ran to check that the results are robust to including legislators with prerelatives control for that characteristic, however, suggesting that it does not drive the result in those regressions.

[^13]:    ${ }^{21}$ A similar strategy was used by Levitt and Snyder (1997) to examine the impact of federal spending on electoral outcomes.
    ${ }^{22}$ One specification looks at state-quarter pairs. We do not have enough observations so as to try state-year fixed effects.

[^14]:    ${ }^{23}$ This of course subtracts out the result of the individual for whom the instrument is being created.

[^15]:    ${ }^{24}$ Historically there have been elections where the top two or more candidates were elected to Congress. Upon inspection we found that these elections tend to have results that are confusing and do not match with results from other sources. For the time being we have decided to drop these elections out.
    ${ }^{25}$ This makes merging on candidate name quite difficult.
    ${ }^{26}$ We have decided to focus on House elections since for our purposes the Senate will not add a substantial amount of data since Senators were not elected until the beginning of the twentieth century, are much less in number than House members, and have less frequent election cycles.
    ${ }^{27}$ We only merged on the first letter of the first name because the first names in the elections dataset were often garbled and incomplete.

[^16]:    ${ }^{28}$ The problem with analyzing the data that was merged as explained above is that characteristics of politicians (such as gender, age, etc.) would be correlated with the decision to retire from office. Thus if we observed women were much less likely to have a successful merge it would be impossible to determine if that was due to data being less likely to be recorded or women being less likely to choose to run for re-election. This problem does not occur in the alternative merging technique.

