Political Dynasties and the Incumbency Advantage in Party-Centered Environments[*]

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Abstract

There is a growing literature on the phenomenon of dynasties in democracies, with most studies indicating a causal effect of incumbency on dynasty formation under candidate-centered electoral systems. In this study, we explore the relationship between the incumbency advantage and dynasties in the party-centered, closed-list proportional representation context of Norway. We use an original data set of all candidates in Norwegian parliamentary elections from 1945-2013, and apply a regression discontinuity design to evaluate both the incumbency advantage and the *inherited* incumbency advantage. We document that the incumbency advantage exists even in the party-centered environment of Norway. However, although we document a share of dynasties (7 percent) that is comparable to the United States, we find no evidence that incumbency has a causal effect on their formation. This finding suggests some form of internal party organizational network as a mechanism underlying dynastic politics that operates beyond the incumbency advantage.

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1   Introduction

What explains the persistence of family dynasties in democracies? Dynasties, of course, are common in *non-democratic* regimes such as personal dictatorships (Brownlee, 2007; Monday, 2011; McMillan, 2013), and practically all democracies in existence today were at one point ruled by a hereditary leadership. But that dynasties should continue to exist in *democracies* seems to run counter to widely held normative visions of democratic opportunity—even given the fact that members of dynasties must ultimately be popularly elected. And yet, dynasties are common among candidates and legislators in many democracies.[1] Recent prominent examples include the Clinton and Bush dynasties in the United States, the Trudeau dynasty in Canada, the Gandhi dynasty in India, the Park dynasty in South Korea, and the Abe dynasty in Japan.

A growing body of research attempts to explain this phenomenon. One explanation points to the dominance of elites in political life more generally (Pareto, 1901; Michels, 1915; Mosca, 1939; Mills, 1956; Putnam, 1976). Once in power, elites have an incentive, and often the means, to maintain their positions of power. The advantages enjoyed by elites are easily transferred to their children, either directly, or by virtue of increased opportunities for education and career advancement. This type of elite dominance theory is likely to have the most power in explaining dynasties in developing democracies, where politicians tend to enjoy much higher standards of living than their constituents, and parties are weak or personalized. Indeed, a high proportion of dynasties has been documented in the national politics of the Philippines (Querubin, 2016), India (Chhibber, 2013; Chandra, 2016), Mexico (Camp, 1982), Nicaragua (Vilas, 1992), and Argentina (Rossi, 2009).

In developed democracies, the perpetuation of dynasties may simply be due to the political advantages of a dynastic background. For example, Dal Bó, Dal Bó and Snyder

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[1]We define a *legacy candidate* as any candidate for national office who is related by blood or marriage to a politician who had previously served in the national legislature or executive (cabinet) (Smith, 2012). If a legacy candidate is elected, he or she creates a *dynasty*, which we define as any family that has supplied two or more members to national-level office.

(2009) reject the idea that dynasties in the U.S. Congress reflect differences in innate family characteristics, and find that the probability of a dynasty forming has more to do with the length of time a founding member holds office, suggesting a "power-treatment effect" acting on the ability of dynasties to self-perpetuate. In other words, a key factor in predicting the emergence of a new dynasty is the strength of the founding member's incumbency advantage.

The incumbency advantage in elections can include the direct advantages of being in office (such as increased name recognition and on-the-job experience), as well as the deterrence of high-quality challengers—though these components are challenging to disentangle (e.g., Gelman and King, 1990; Cox and Katz, 1996; Levitt and Wolfram, 1997; Carson, Engstrom and Roberts, 2007; Hirano and Snyder, 2009). Most recent studies aim to estimate the *causal effect* of incumbency on future election outcomes through the use of regression discontinuity (RD) designs applied to close elections, where the "treatment" of winning office can be considered "as good as random" (e.g., Lee, 2008; Fowler and Hall, 2014; Hall and Snyder, 2015; Eggers et al., 2015).

Dal Bó, Dal Bó and Snyder (2009) similarly use this approach to evaluate the causal effect of incumbency on the creation of a political dynasty. Although holding office does not have an effect on the innate personal characteristics of a politician's child or other relative, it most certainly increases the connections, familiarity with politics, and name recognition that can be taken advantage of by such potential successors. Similar to affiliation with a party label, family names can function as "brands" which convey information to voters at a low cost, helping to cue the established reputation of the family (Downs, 1957; Feinstein, 2010), and can be especially valuable when party labels are a weak source of information. It is not difficult to imagine how a "legacy" candidate, particularly one who immediately succeeds his or her family member as a candidate in the same district, might "inherit" part of a predecessor's incumbency advantage. The advantage in intra-party candidate selection and election enjoyed by a new legacy candidate can thus be thought of as an *inherited incumbency advantage* (Smith, 2012). To reframe this idea in

the language of the literature on the incumbency advantage, we can think of the inherited incumbency advantage as the causal effect of holding office on the future political success of a family member.

If personal reputation is important to garnering votes, candidates whose relatives have previously served in politics can capitalize on the name recognition and established support inherited from those relatives. Indeed, recent single-country studies of dynasties in developed democracies like the U.S. (e.g., Clubok, Wilensky and Berghorn, 1969; Laband and Lentz, 1985; Dal Bó, Dal Bó and Snyder, 2009; Feinstein, 2010), Japan (e.g., Ishibashi and Reed, 1992; Taniguchi, 2008; Asako et al., 2015), and Ireland (e.g., Smith and Martin, 2015) have explained the persistence of dynasties by emphasizing the importance of name recognition in elections that are often more centered on individual candidate characteristics than on parties or policies. In a comparative study, Smith (2012) explicitly makes the argument that dynasties will be more common in democracies that use candidate-centered electoral systems and where the candidate selection process within parties is decentralized to local actors.

In this study, we make two major contributions to the literature. First, we extend the incumbency advantage literature from a candidate-centered environment to a party-centered environment: Norway's closed-list proportional representation (PR) electoral system. In candidate-centered electoral systems, such as the U.S., the incumbency advantage is substantial. Fowler and Hall (2014), for example, find that incumbency increases a candidate's probability of victory by 53 percentage points.[2] Less is known about the incumbency advantage in party-centered PR systems like that used in Norway.[3] Because

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[2]This estimate refers to the candidate's *personal* incumbency advantage, not *any* candidate's advantage from being a member of the incumbent *party*. Lee (2008) was the first to use an RD design to study the *party* incumbency advantage, estimating a 45-percentage-point increase in the probability of election, or roughly 7.8 percentage-point vote share advantage. Fowler and Hall (2014) estimate the personal incumbency advantage in terms of vote share to be 8.8 percentage points. Using a different approach, Erikson and Titiunik (2015) estimate the personal incumbency advantage in terms of vote share to be 7.6 percentage points.

[3]Kotakorpi, Poutvaara and Terviö (2013) find that incumbency yields an 18-percentage-point increase in the probability of an individual winning a seat in the next election in Finland, which uses an open-list PR system with a mandatory candidate preference vote. They find a considerably smaller effect (3 percentage points) in local elections, in line with other studies of the incumbency advantage in the Nordic countries (Lundqvist, 2013; Hyytinen et al., 2014). In Ireland, which uses the single transferable

Norway's closed-list system excludes preferential voting for candidates, voters' decisions are, in theory, based more on evaluations of parties and those parties' policy programs than on the characteristics of candidates on the parties' lists.[4] Moreover, a candidate's rank position on the list, and thus how likely he or she is to win a seat, is determined by the party, not voters. How strongly does the winning of office in a party-centered system affect the probability that a candidate will continue to run (and win) in the future? As far as we are aware, ours is the first study of the incumbency advantage in a closed-list PR setting.

Our second contribution is to test whether there is an *inherited* incumbency advantage under Norway's party-centered PR system. In the U.S., Dal Bó, Dal Bó and Snyder (2009) estimate that winning one's first re-election attempt increases the probability of forming a dynasty by 6 percentage points, on average, and up to 14 percentage points in the South. Querubin (2016) estimates the effect for candidates in the Philippines to be 12 percentage points. Recent work by Van Coppenolle (2014), however, finds no effect of first-term incumbent re-election on the probability of forming a dynasty under plurality-rule single-member district (SMD) elections in the United Kingdom, which for various reasons, including the parliamentary system of government, tend to be more party-centered than in other countries that use SMDs, such as the United States. Norway's closed-list PR system is theoretically even *more* party-centered (Carey and Shugart, 1995).

Nevertheless, members of dynasties have accounted for roughly 7 percent of Norwegian members of parliament (MPs) in recent decades (Figure 1)—a proportion that is comparable to the U.S. and the U.K.—and have occupied several high-profile positions. For example, former Prime Minister Jens Stoltenberg (2005-2013) is the son of former Minister of Defense (1979-81) and Minister of Foreign Affairs (1987-1989; 1990-1993)

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vote (STV) system, Redmond and Regan (2015) also estimate an 18-percentage-point increase in the probability of incumbents winning in the next election. Golden and Picci (2015) analyze incumbency effects for two parties under open-list PR in Italy (1948-1992), finding that incumbents are more likely to be *re-selected*, but not *re-elected*. Liang (2013) finds a considerable *party* incumbency advantage in the context of local Swedish elections decided by closed-list PR.

[4]This does not mean that voters do not recognize or care about candidates, particularly those at the top of their preferred party's list (cf. Bengtsson et al., 2013, pp. 88-89).

Thorvald Stoltenberg. And the Stoltenbergs are not alone: of the fourteen Norwegian prime ministers to serve since 1945, four had dynastic links former politicians, and five had family members who followed them into politics. Does the emergence of dynasties in a party-centered environment like Norway operate in the same fashion as it does in more candidate-centered environments? In other words, is there a causal effect of incumbency on whether a family member will run for and win office in the future, as appears to be the case in the U.S. and other candidate-centered contexts?

Figure 1: Political Dynasties in 22 Democracies
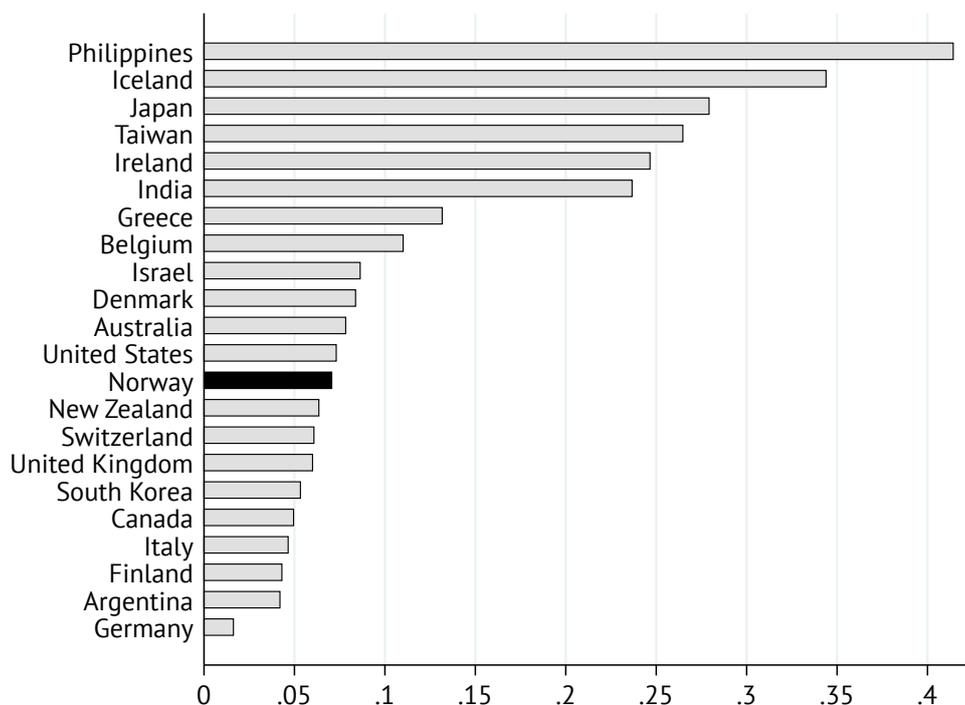
Note: Bar values represent the average proportion of MPs in each country (lower chamber only) elected between 1995 and 2015 (unless otherwise noted in sources) who were related to a previously elected national-level politician. Data for the Philippines are based on a proxy measure matching names. All other data are based on verified biographical information. Sources: Philippines: Querubin (2016); Taiwan (2001-2012 only): Batto (2015); India (2004-2014 only): Chandra (2016); Greece (2000-2012 only): Patrikios and Chatzikonstantinou (2014); Denmark (2011 only): Ekstra Bladet online newspaper (http://ekstrabladet.dk/nyheder/politik/article4077214.ece); United Kingdom: Van Coppenolle (2014); Argentina (1995 only): Rossi (2009); all other country data were collected and coded by the authors.

To investigate these questions, we use an original data set that includes all candidates to the Norwegian parliament (Storting) from 1945-2013. We evaluate both the incum-

bency advantage and the inherited incumbency advantage with an RD design adapted for use in PR list systems (Folke, 2014), which takes advantage of the fact that candidates who marginally win or lose a seat can be considered more or less equivalent in all other respects apart from the "treatment" of winning office. As noted, related RD designs have previously been used to investigate the inherited incumbency advantage in majoritarian elections (Dal Bó, Dal Bó and Snyder, 2009; Querubin, 2016; Van Coppenolle, 2014), but ours is the first study to evaluate the phenomenon under closed-list PR.[5]

Our results document a strong incumbency advantage for Norwegian MPs, despite the party-centered nature of elections. However, we find no evidence of an inherited incumbency advantage—our estimates indicate that marginally unsuccessful candidates are just as likely to have relatives run and win office in the future as marginally successful candidates. In comparison to the RD results from other contexts, these findings point toward important country-level or institutional differences in the underlying mechanisms in the formation of dynasties, which may in part help to explain the observed variation in the overall prevalence of dynasties across democracies. Since election prospects in party-centered systems like Norway depend on party list placement, our findings indicate some form of advantage to both incumbents and potential legacy candidates that operates through better connections with the local party organization, rather than just better name recognition among voters. Most founding members of dynasties are powerful leaders in their parties, far from being at risk of losing their seats; their successors tend to be given similarly privileged list positions. However, for would-be founders of a political dynasty at marginal list positions, simply running and becoming a known entity in a party—even without winning office—can potentially confer future advantages to one's relatives.

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[5]One shortcoming of the data sets used by Dal Bó, Dal Bó and Snyder (2009) and Van Coppenolle (2014) is that they lack information on candidates who never won, so the RD design must be applied to marginal winners and losers in the candidates' first *re-election* attempts. Querubin (2016) relies on unverified matches based on family names in order to analyze unelected candidates. Our data set improves on these issues, as we include verified family ties for narrowly defeated candidates. We additionally use the matching-on-names proxy method employed by Querubin as a robustness check, and report the (unaffected) results in the Appendix.

2 Institutional Setting and Data

Our data set includes all candidates who ran in the 18 Storting elections held between 1945 and 2013. Unlike the other four Nordic countries (Denmark, Finland, Iceland, Sweden), Norway's PR electoral system is entirely closed-list—parties provide a ranked list of candidates in each district, and voters cast their ballot for the party list as a whole. Seats are allocated to parties in multi-member districts, and then allocated to candidates in order of their rank on the party list.[6] The candidate selection process within parties is regulated by law. Candidates and their rank positions are determined by local nominating conventions attended by dues-paying party delegates in each district. The re-nomination of former candidates, including incumbents, is not automatic (Valen, Narud and Skare, 2002).

The Norwegian party system is well represented by a left-right dimension (Strøm and Leipart, 1993; Narud and Strøm, 2011). The main cleavage runs between the left-leaning social democratic and the right-leaning conservative camps. The Labor Party (DNA) is the dominant party within the left-leaning bloc, which also consists of the Communist Party (NKP), and the Socialist Peoples' Party/Socialist Left Party (SV).[7] The right-leaning bloc consists of the Center Party (SP; formerly the Farmer's Party), the Christian Peoples' Party (KrF), the Liberal Party (V), the Conservative Party (H), and the Progress Party (FrP; founded in 1973). We classify these eight parties as the *main parties*.[8] Party identification among voters has historically been high, at roughly 70

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[6]In the 1921 to 1949 period, 150 MPs were elected in 29 districts using the D'Hondt seat allocation method. In 1953, the Modified Sainte-Laguë seat allocation method replaced D'Hondt. Both seat allocation methods are within the class of highest average methods, but Modified Sainte-Laguë mechanically produces a more proportional outcome (Fiva and Folke, 2016). The 1953 reform also abolished a separation of urban and rural districts, which reduced the number of districts from 29 to 20. Two electoral districts merged before the 1973 election. Since 1973, districts follow county (*fylke*) borders. Adjustment seats were introduced in 1989 to further increase proportionality. Assembly size has been increased four times since 1921: in 1973 (155 seats), in 1985 (157 seats), in 1989 (165 seats), and in 2005 (169 seats). District magnitude ranges from 4 to 15 seats, with an average of about 8. For an overview of the history of the Norwegian election system, see Aardal (2002).

[7]The Socialist Peoples' Party participated in elections from 1961-1969. In 1973, they competed as the *Socialist Electoral League* together with the Communist Party. The Socialist Left Party was founded in 1975, and the Socialist Electoral League was dissolved.

[8]Appendix Figure A.1 shows the development over time in party seat shares.

percent in the early postwar period, but has gradually dipped since the 1980s to around 50 percent (Bengtsson et al., 2013, p. 71).

2.1 Candidates

Our candidate-level data come from *Norges Offisielle Statistikk* (Official Statistics of Norway), which publishes electoral lists for all parties in each election year. In addition to party names, the electoral lists include each candidate's name, rank position, occupation, and hometown. The total number of observations in the data set is 49,480. Since 1961, full names (first and last) of candidates are given. In the 1945 to 1957 period, full names are given only for female candidates, while first initials and last names are given for male candidates. We manually supplemented male first names for the 1945 to 1957 period using biographical information from the *Archive of Politicians* provided by *The Norwegian Social Science Data Service*, later electoral lists, and other sources, and standardized the format and spelling of individuals' names across observations.[9] We classified candidates' gender based on first names.

The number of candidates running in each election increased from about 1,500 to 4,000 during the postwar period. Most of the increase came from minor parties with slim chances of winning representation.[10] If we exclude these minor parties, the increase in the number of candidates running per election is more modest, from about 1,500 to 2,000 (Appendix Figure A.2). We restrict our empirical analyses to the main parties, and supplement the individual-level candidate data with election statistics from Statistics Norway.[11] Party vote counts at the district level allow us to measure how close individual candidates from these main parties were to winning (losing) a seat, given the number of

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[9]This was done to avoid misidentification of dynasties based on the same individual running in multiple years with slight variations in his or her name. In the case that two or more individuals shared a commonly held name (e.g., Hans Hansen), we distinguished individuals with numerals following the first name (e.g., Hans1 Hansen, Hans2 Hansen, and so on).

[10]Many candidates from minor parties run on their party list in multiple districts in the same year, which inflates the number of candidate observations. This practice is uncommon in the main parties.

[11]Over the 1945-2013 period, the main parties won 2,776 seats (8.5 percent of candidates were successful), while the remaining lists won a total of 63 seats (0.4 percent of candidates were successful); 57 of the 63 seats won by non-main parties were won on joint lists with the main parties.

votes and seats won by each party and each candidate's rank on the party list.

The *Archive of Politicians* contains detailed biographical information for all cabinet ministers, MPs, permanent deputy MPs (who serve in the event that an MP is promoted to cabinet or leaves office), and deputy MPs serving at least 100 days during a term.[12] Importantly for our purposes, this data set also includes information on family ties between politicians. Figure 2 shows the proportion of Norwegian MPs after each election who were related to a previously elected MP or cabinet minister. For comparison, the figure also plots the proportion in the U.S. House of Representatives over the same time period. In both countries, the proportion of dynasties in the legislature has remained relatively stable—between roughly 5 and 10 percent of members. For our analysis, we focus on the predecessors of the Norwegian MPs and construct a variable, *Family member winning future seat*, which is a dummy equal to one if the candidate has a relative who becomes an MP or cabinet member in the future. For elected candidates, this variable accurately captures dynastic ties.

For unsuccessful candidates, we lack systematic biographical data unless the candidate served as a deputy, or won a seat in a different election. Thankfully, the Norwegian system of designating the runners-up (in terms of list position) as deputies to serve in the event of an MP resignation means that we were able to obtain information on family ties for many marginally unsuccessful candidates. We searched the Internet for biographical information for all remaining unelected candidates who were next in line to win a seat, and included this information in the *Family member winning future seat* variable. We searched particularly carefully for family ties when candidates shared a last name with a future MP from the same party. This approach delivered several additional cases of family ties.

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[12]The biographical data are also available on the Storting webpage: https://www.stortinget.no/no/Representanter-og-komiteer/Representantene/Biografier/. These biographical data go as far back as 1814, the first Storting election, but are most complete for MPs elected since 1945.

Figure 2: Political Dynasties in Norway, 1945-2013
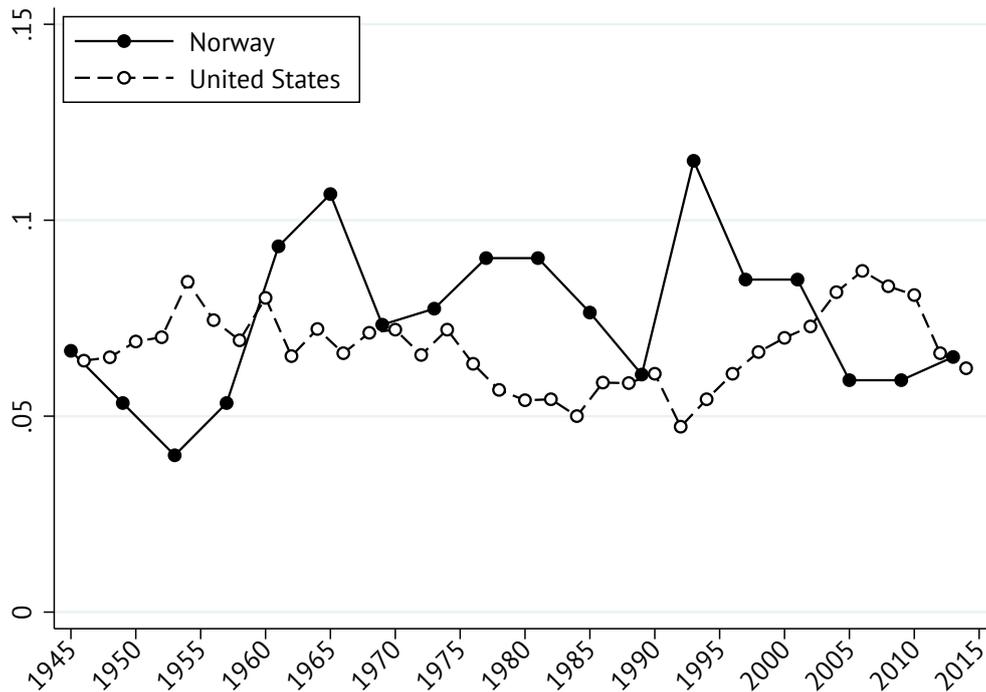
Note: Trend line represents the proportion of all elected MPs in each year who were related to a previously elected MP or cabinet minister, and includes relationships to MPs and cabinet ministers who served prior to 1945. For comparison, we also plot the trend line for the U.S. House of Representatives. Data for the U.S. are compiled from ICPSR Study 7803 and replication data for Dal Bó, Dal Bó and Snyder (2009), and updated for recent years using the online Biographical Directory of the United States Congress (http://bioguide.congress.gov/biosearch/biosearch).

2.2 Estimation Sample

Our estimation sample is based on candidates running in the 1953-1981 period for one of the eight main parties (13,306 candidate-year observations).[13] We limit the data set to candidates running in this period for two reasons. First, we need a sufficiently large period *after* candidates have run in order for family members to potentially appear in the data.[14] Second, we want to avoid complicating the analysis with a 1989 electoral reform that introduced adjustment seats, and the 1945, 1949, and 1985 elections, in which parties were allowed to join forces in electoral cartels (*listeforbund*).[15]

Candidates can be broadly classified as belonging to one of three categories: 1) candidates with a safe position on the list, 2) candidates with some chance of winning representation, and 3) candidates with virtually no chance of winning. For purposes of implementing our RD design, only the second group is relevant. To pin down this subsample, we start by identifying candidates, for each party, who are either next in line to win a seat (*marginal losers*), or first in line to lose a seat (*marginal winners*). Figure 3 gives the frequency of observations as a function of rank distance to the marginally elected. In our sample, 11 percent of candidates are *marginal* (grey bars in Figure 3, 1,472 observations).[16] We consider the 84 percent of candidates who are more than one rank position away from winning a seat to be *hopeless* candidates (white bars in Figure 3). The remaining 5 percent of candidates have safe positions on the lists; they finish more than one rank position away from losing their seats (black bars in Figure 3).

In two-party SMD elections, it is straightforward to measure electoral closeness, since a predefined threshold (50 percent of the total vote count) decides the winner. In multi-member PR elections, this is more complicated, since the number of seats a party wins

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[13]In 1973, four FrP candidates ran in two districts. We keep only the observation in which they got closest to winning (or actually won) a seat.

[14]The proportion of candidates with a future family member recorded in our data begins to decline because of censoring around the mid-1990s (Appendix Figure A.3).

[15]Voters would cast their votes for individual party lists, but the allocation of seats was based on the total sum of votes cast for the participating parties.

[16]Overall, there are more marginal losers than marginal winners since the typical electoral district will have several parties running that do not win any seats (i.e., these parties do not have any candidate "next in line to lose a seat").

Figure 3: Frequency of Observations as a Function of Rank Distance to Marginally Elected
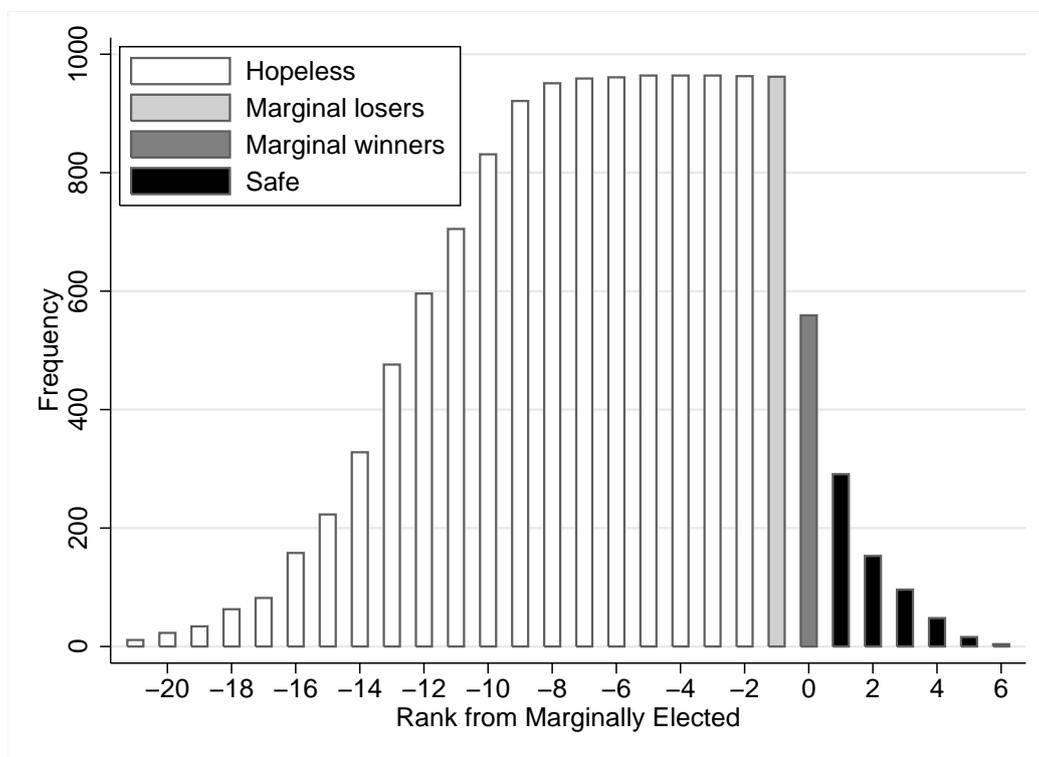
Note: Sample consists of all candidates from the main parties. Unit of observation is candidate-year (N=13,282).

depends on the vote counts of *all* parties. In this case, there is no predefined threshold for a given party to win an additional seat. As a measure of electoral closeness, Folke (2014) proposes to measure the distance to a seat threshold as the minimum total vote change across all parties that would be required for a party to experience a seat change.[17] To measure how close a marginal candidate was from winning (losing) a seat, we implement Folke's distance measure, and refer to this as the *Win Margin* in the following.

Figure 4 gives the frequency of observations for the sub-sample of marginal candidates. There is no evidence of any sorting around the threshold for a seat change, a potential problem with the "as good as random" assumption of RD designs in SMD settings (Caughey and Sekhon, 2011; Eggers et al., 2015).[18] This is not surprising, since

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[17]This measure has also been applied by Fiva, Folke and Sørensen (2013) to study the impact of representation on fiscal policies in Norwegian local governments.

[18]Appendix Figure A.4 shows McCrary density plots.

parties/candidates cannot predict *ex ante* where the seat thresholds are going to be in multi-member PR elections (Fiva, Folke and Sørensen, 2013).

Figure 4: Distance to Seat Threshold for Marginal Candidates
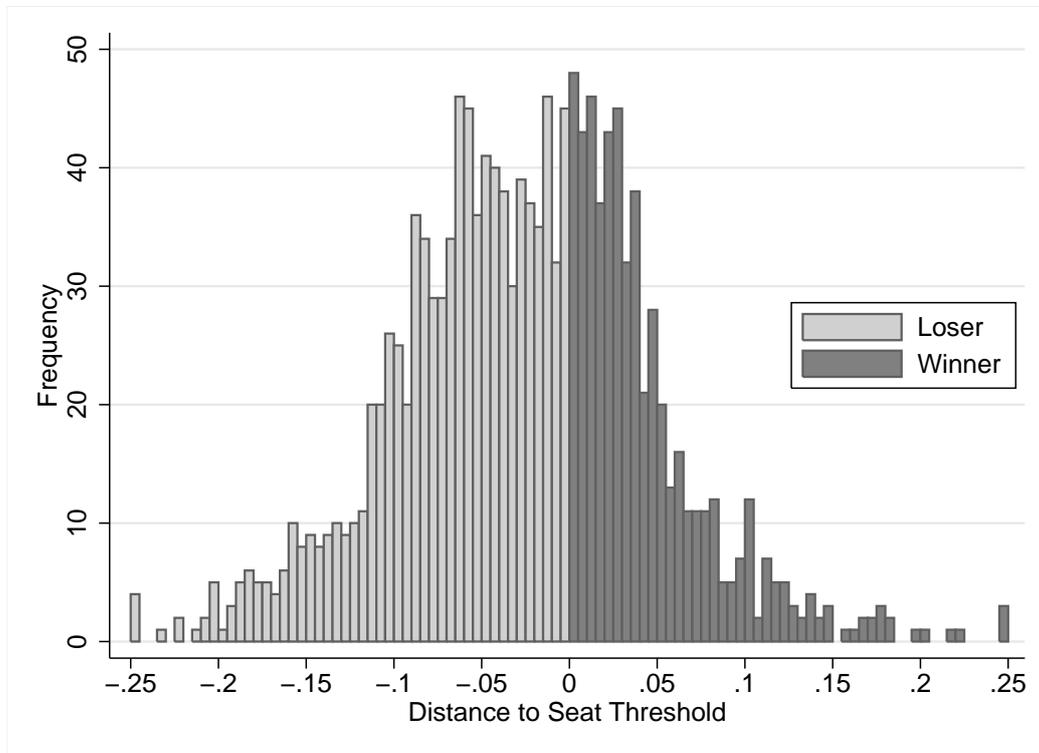
Note: Each bin represents an interval of half a percentage point. Sample consists of candidates that are either next in line to win a seat (marginal losers), or first in line to lose a seat (marginal winners), for the main parties (N=1,472). Unit of observation is candidate-year. Figure is truncated at −0.25 and +0.25.

3   Empirical Strategy

In our empirical analysis, we aim to answer two questions. First, how does the probability of winning a seat in subsequent elections depend on a candidate's seat status in the current election? We refer to this as the *incumbency advantage*. Second, how does tenure in office affect the probability of having a family member serve as an MP (or cabinet minister) in the future? We refer to this as the *inherited incumbency advantage*.

To answer these questions, we rely on an RD design using the sub-sample of marginal

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candidates identified in the previous section. Our baseline empirical specification is a local linear regression of the form:

$$Y_i = \beta_0 + \beta_1 Seat_i + \beta_2 Win\ Margin_i + \beta_3 Win\ Margin_i {}^*Seat_i + \xi_i, \qquad (1)$$

where $Seat_i$ is a dummy equal to one if candidate i wins a seat in parliament in the current election. Equation (1) allows the slope of the regression line to differ on either side of the cut-off by including interaction terms between *Win Margin* and *Seat*. ξ_i is an error term.[19]

Y_i represents one of four outcome variables: 1) a dummy variable equal to one if candidate i runs in the subsequent election; 2) a dummy variable equal to one if candidate i wins a seat in the subsequent election; 3) the total number of Storting terms served by candidate i; or 4) a dummy variable equal to one if candidate i has a family member who ever wins a seat in the future. In the first two cases, β_1 estimates the average *incumbency advantage* in a "sharp" RD framework.

In our analysis of the *inherited incumbency advantage*, we consider the third case, where *terms served* is the outcome variable, as the first-stage equation. This equation estimates how the total number of terms served (i.e., tenure in office) changes with seat status in the current election. In the fourth case, where *family member winning future seat* is the outcome variable, β_1 is a reduced form estimate which pins down how the probability of having a family member serving in the future depends on a candidate's seat status in the current election. The *local average treatment effect* of serving one additional term can be recovered by dividing this estimate by the discontinuity jump from the first-stage equation, i.e., using a "fuzzy" RD framework (Lee and Lemieux, 2010).

The RD design is expected to deliver "as good as random" variation in seat status when we are sufficiently close to the threshold for a seat change. Hence, it is unnecessary

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[19]We cluster standard errors at the candidate level.

to include covariates capturing candidate characteristics in Equation (1) for identification. In practice, however, it is useful to include them in our analysis, because doing so can reduce the sampling variability in the RD estimator (Lee and Lemieux, 2010). We can also use pre-determined candidate characteristics, like party affiliation, gender, and occupation, to assess the validity of the RD design. There should be no discontinuities in variables that are determined prior to the treatment. The same logic applies to candidates' seat status in preceding elections. To test the validity of our research design, we add covariates successively to the analysis, and also relate current win margins to candidates' seat status in previous election periods ($t-1$, $t-2$, $t-3$, or $t-4$).

4   Results

We first present graphical evidence of the incumbency advantage and inherited incumbency advantage using a common bandwidth of 5 percentage points for *Win Margin*. In our statistical analysis, we choose the optimal estimation window (bandwidth) around the cut-off suggested by the algorithm developed by Calonico, Cattaneo and Titiunik (2014). As a robustness check, we also plot the RD estimates as functions of the bandwidth chosen.

4.1   Graphical Analysis

Figure 5 gives the RD plots based on candidates' contemporaneous (election t) win margin. In the top-left panel, the outcome variable is a dummy equal to one if the candidate *runs* in the subsequent election ($t+1$). In the top-right panel, the outcome variable is a dummy equal to one if the candidate *wins a seat* in the subsequent election ($t+1$). In the bottom-left panel, the outcome variable is the number of *terms served* by the candidate. Finally, in the bottom-right panel, the outcome variable is a dummy equal to one if a *family member wins a seat* in any future election. We plot local averages of the outcome variables calculated within bins of half a percentage point (scatterpoints), and separate

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regression lines on each side of the discontinuity. The vertical line represents a zero win margin, and indicates the transition from candidates who marginally lost to those who marginally won.

Figure 5: RD Plots of Incumbency Advantage and Inherited Incumbency Advantage
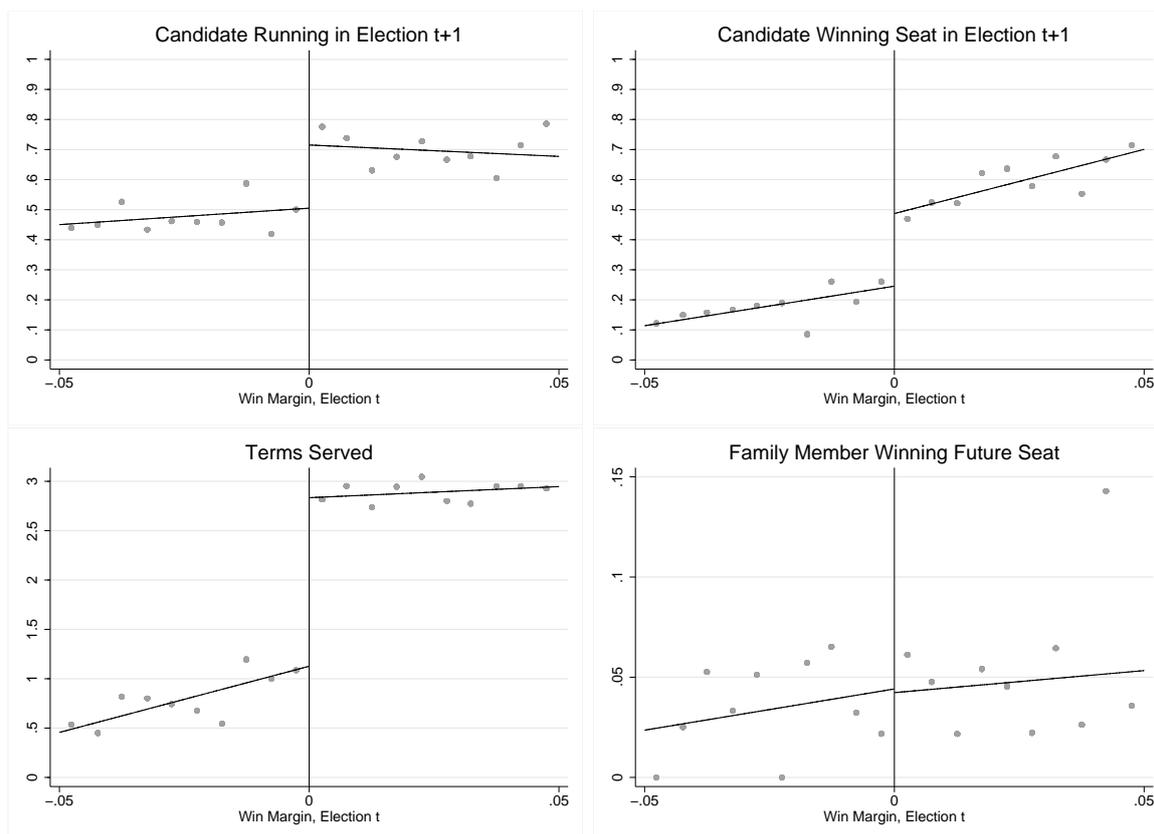
Note: Sample restricted to candidates from the main parties who are less than 5 percentage points away from the seat threshold (N=764). Each bin is for an interval of half a percentage point. Separate linear regression lines are estimated to the left and right of the discontinuity using the underlying data, not the binned scatterpoints.

Visual inspection of the data provides clear evidence of an incumbency advantage. In the top-left panel of Figure 5, we see that winning a seat in the current election increases a candidate's probability of running again in the next election. Moreover, the top-right panel of Figure 5 indicates that the probability of becoming an MP in the next election roughly doubles for candidates just narrowly winning a seat in the current election. Note that this calculation includes all candidates who ran at election t (i.e., it

is not conditional on running at $t + 1$).[20] In Appendix Figure A.5, we document that the incumbency advantage persists for one subsequent election, but then appears to fade out.[21]

The existence of an incumbency advantage implies that winning a seat in the current election increases the number of expected terms served by more than one term. In the bottom-left panel of Figure 5, we find that this is indeed the case. The total number of terms served appears to jump from about 1.1 to 2.8 at the cut-off.

When it comes to the inherited incumbency advantage, the raw data provide no clear evidence that winning a seat has a causal effect on the future political careers of a politician's family members. It appears from the bottom-right panel of Figure 5 that the probability of having a family member winning a seat in the future is about 0.04 for both marginal losers and marginal winners close to the cut-off.

4.2 Statistical Analysis

In Table 1, we give the regression results using the optimal bandwidth suggested by the Calonico, Cattaneo and Titiunik (2014) algorithm. The optimal bandwidth varies from about 4 to 7 percentage points, depending on the outcome variable analyzed. The first column provides the baseline results based on Equation (1). In columns (2)-(5), we sequentially add fixed effects for year, party, district, and list rank to the model specifications. Finally, the specification in column (6) adds a set of control variables for occupation and gender.

Consistent with the previous graphical evidence, the econometric estimation finds evidence of a substantial incumbency advantage. In the baseline specification, the proba-

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[20]While the RD design makes it straightforward to estimate the effect of winning unconditional on running, estimating the conditional effect requires addressing selection into future candidacy (Anagol and Fujiwara, Forthcoming). We do not attempt to address this selection issue here.

[21]As expected, we do not find any systematic pattern between current win margin and candidates' seat status in previous elections (cf. Appendix Figure A.6). The jumps at the cut-off in Appendix Figure A.6 are small relative to the bin-by-bin variation away from the cut-offs, suggesting that these differences are due to noise.

Table 1: RD Estimates of Incumbency Advantage and Inherited Incumbency Advantage

Panel A: Candidate running in next election

	(1)	(2)	(3)	(4)	(5)	(6)
RD estimate	0.201	0.207	0.218	0.209	0.213	0.200
	(0.067)	(0.067)	(0.066)	(0.066)	(0.067)	(0.068)
R^2	0.054	0.065	0.099	0.129	0.139	0.146
N	731	731	731	731	731	731
Bandwidth	0.048	0.048	0.048	0.048	0.048	0.048

Panel B: Candidate winning seat in next election

	(1)	(2)	(3)	(4)	(5)	(6)
RD estimate	0.242	0.244	0.268	0.267	0.273	0.261
	(0.061)	(0.062)	(0.060)	(0.062)	(0.062)	(0.062)
R^2	0.191	0.196	0.251	0.273	0.283	0.291
N	799	799	799	799	799	799
Bandwidth	0.053	0.053	0.053	0.053	0.053	0.053

Panel C: Number of terms served

	(1)	(2)	(3)	(4)	(5)	(6)
RD estimate	1.706	1.707	1.796	1.723	1.708	1.693
	(0.208)	(0.206)	(0.202)	(0.201)	(0.196)	(0.199)
R^2	0.372	0.381	0.415	0.463	0.486	0.495
N	746	746	746	746	746	746
Bandwidth	0.049	0.049	0.049	0.049	0.049	0.049

Panel D: Family member winning future seat

	(1)	(2)	(3)	(4)	(5)	(6)
RD estimate	-0.006	-0.008	-0.018	-0.017	-0.019	-0.019
	(0.024)	(0.024)	(0.023)	(0.021)	(0.020)	(0.020)
R^2	0.004	0.011	0.050	0.095	0.102	0.127
N	940	940	940	940	940	940
Bandwidth	0.065	0.065	0.065	0.065	0.065	0.065
Year FE	No	Yes	Yes	Yes	Yes	Yes
Party FE	No	No	Yes	Yes	Yes	Yes
District FE	No	No	No	Yes	Yes	Yes
Rank FE	No	No	No	No	Yes	Yes
Controls	No	No	No	No	No	Yes

Note: The reported RD estimates correspond to β_1 from Equation (1). In Column 6, we include ten dummies for candidates' occupations in their first election, as well as a dummy for gender. All specifications include separate linear control functions on each side of the discontinuity. Standard errors clustered at the candidate level are in parentheses.

bility of winning a seat in the subsequent election increases by about 24 percentage points (Panel B, Column 1) for a marginally elected candidate. This effect, surprisingly, is larger than what has been found in the open-list PR and PR-STV cases of Finland and Ireland, respectively (Kotakorpi, Poutvaara and Terviö, 2013; Redmond and Regan, 2015), but about half the size of the personal incumbency effect found in the U.S. (Fowler and Hall, 2014). The incumbency advantage estimate is statistically significant at the one percent level, and is insensitive to the inclusion of controls (cf. Column 2-6).[22]

Golden and Picci (2015) argue that successful candidates in postwar Italian open-list PR elections enjoyed an increased probability of being *re-selected* by their party. The results from Panel A in Table 1, show that this is likely to be an important component of the incumbency advantage in Norway, as well. For a marginally elected candidate in the current election, the probability of being on the ballot four years later increases by about 20 percentage points (Panel A, Column 1). Again, the RD estimate is statistically significant at the one percent level. The RD estimates in Panel A are, however, consistently smaller than in Panel B, suggesting that the "re-selection" mechanism is not driving the incumbency advantage in its entirety.

In Panel C, we provide the results for the number of terms served, which can be considered our first-stage equation. We find that a narrowly won seat increases the number of terms served by 1.7. There is no weak instrument problem—the first-stage *F-statistic* is large (> 65) in all specifications.[23]

In Panel D, we provide results for the inherited incumbency advantage. The estimated effects of marginally winning a seat on the probability of having a family member winning

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[22]For example, Column 6 reports the results with the inclusion of controls for occupation and gender. Even though there are strong trends in candidates' occupations over time (cf. Appendix Figure A.7), occupation is well balanced around the threshold for a seat change (cf. Appendix Figure A.8). None of the jumps at the cut-off in Appendix Figure A.8 are statistically significant at the five percent level. There is an increase over time in female candidates, from less than 20 percent in the 1950s to nearly 40 percent by the 1980s, but there is no imbalance around the cut-off.

[23]This is similar to the first stage of Willumsen (2011). He finds an increase of about 1.5 terms using his alternative RD design on Storting elections in the 1977 to 2001 period. Note that, unlike Willumsen, we do not include any time served as a deputy MP in our measure of terms served. If we alternatively use "ever winning a seat" as an outcome variable, the jump at the cut-off is estimated to be 0.46 (SE of 0.05).

a seat in the future are close to zero, and not statistically significant at conventional levels in any specification. Based on the specification with a full set of controls (Panel D, Column 6), the 95% confidence interval ranges from -0.06 to 0.02. Recall that the analyses in Panel D provide reduced form estimates of how the probability of having a family member winning a seat in the future depends on a candidate's seat status in the current election. To get the local average treatment effect of *serving one more term* we must divide the point estimate by 1.7 (cf. Panel C). If we implement a fuzzy RD using a bandwidth of 0.065 in both the first and the second stage, the 95% confidence interval for *terms served* ranges from -0.035 to 0.013. Hence, our results imply that the "power-treatment" effect of incumbency on the probability of forming a dynasty, if it exists at all, is *at most* around 1 percentage point in Norway's party-centered environment.

Figure 6 displays point estimates and corresponding 95% confidence intervals when varying the bandwidth around the seat threshold from 1 to 15 percentage points using the specification with the full set of controls (specification (6) in Table 1). The middle dashed vertical line gives the optimal bandwidth based on the algorithm by Calonico, Cattaneo and Titiunik (2014), which we employ in our specifications. For a bandwidth of about half the optimal bandwidth (left-most dashed vertical line) and onwards, the incumbency advantage estimates are always statistically significant, and relatively insensitive to the bandwidth chosen. The estimated inherited incumbency advantage is close to zero and never statistically significant.[24]

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[24]As an additional robustness check, we replaced our verified measure of dynastic ties with a proxy measure that uses common last names of candidates running in the same district or party over time, as in several recent studies on dynasties, including Querubin (2016) and Geys (2016). While this approach may help to uncover some family relations between pairs of unsuccessful candidates, a potential problem is that the measure is noisy, resulting in imprecise estimates in the RD analysis. In the case of Norway, the proxy does a reasonably good job of identifying verified dynasties, and allows us to identify some likely ties between unelected pairs of candidates. For common last names like Hansen, the name-matching approach overestimates dynastic links (Appendix Figure A.9), so we exclude individuals with the hundred most common last names. We test the effect of incumbency on whether a *family member runs* and whether a *family member wins a seat* in any future election in the same electoral district for the same party. The RD estimates based on this proxy measure again provide no clear evidence that incumbency has a causal effect on the future political careers of family members (Appendix Table A.1 and Appendix Figure A.10 give the results).

Figure 6: Robustness to Alternative Bandwidths
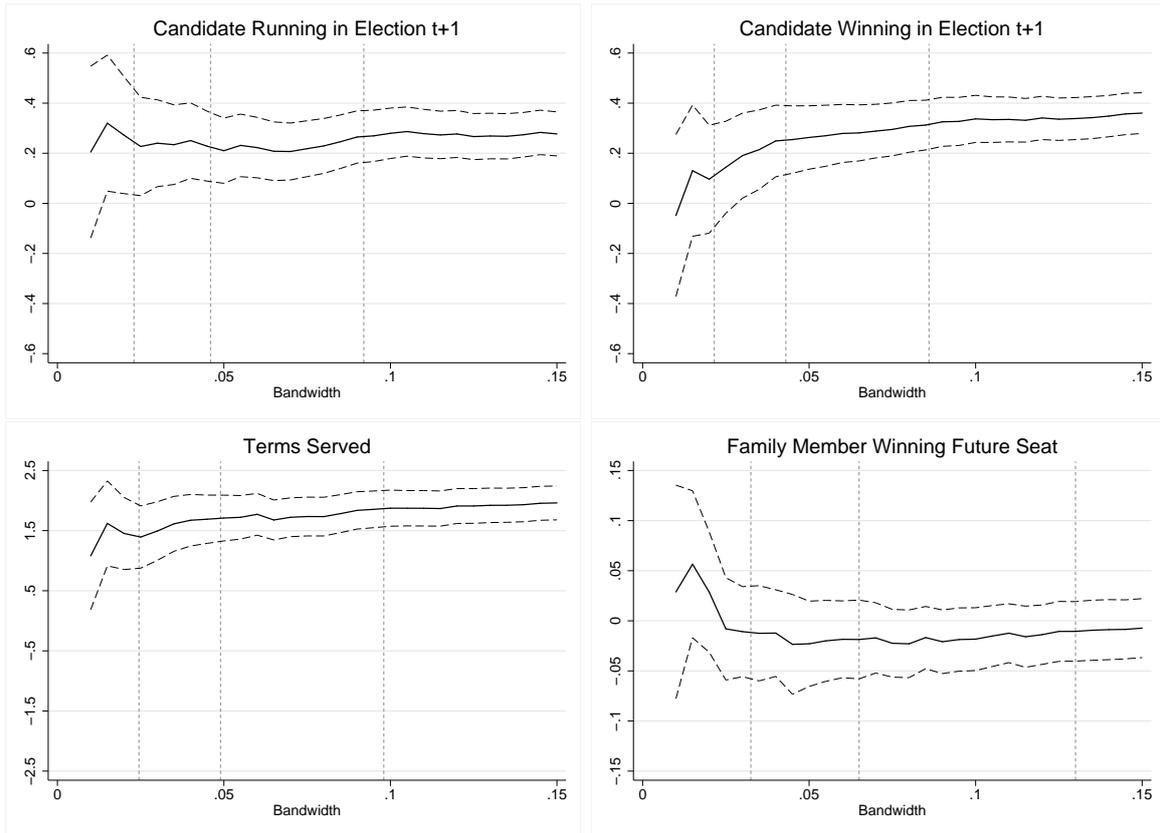
Note: Graphs display the RD estimates and 95% confidence intervals as a function of the bandwidth chosen for various outcome variables (given in the title of each panel). The middle vertical lines in each panel mark the optimal bandwidth chosen by the Calonico, Cattaneo and Titiunik (2014) method, as obtained by the rdrobust module in STATA. These correspond to specification (6) in Table 1. The left-most (right-most) vertical lines mark half (twice) the optimal bandwidth from the Calonico, Cattaneo and Titiunik (2014) method.

5   Discussion

We document a significant incumbency advantage for Norwegian MPs, and a considerably large fraction of dynasties in parliament—in fact, a proportion comparable to that in the United States (Figure 2)—but we do not find any clear evidence of an inherited incumbency advantage. In other words, we find no causal effect of incumbency (alone) on the probability that a family member will enjoy a future career in politics. So what's going on? In this section, we offer two interpretations of our empirical null finding for the inherited incumbency advantage—both of which point to internal party networks as the mechanism behind dynasty formation in party-centered contexts like Norway.

First, it appears that there are many "failed" candidates whose relatives nonetheless go on to get elected in the future, as shown in Figure 5. Since list rank, and thus one's probability of getting elected, depends on the decisions of the party's local nominating conventions—not primary election voters, as in the U.S.—it should perhaps not be surprising that an active candidate who narrowly misses out on getting elected might still have close enough ties to party activists to result in his or her relatives' being better placed in future nomination decisions. The fact that candidate selection is by law decentralized to local party organizations may contribute to this network effect (Smith, 2012).

An additional factor that could explain our null findings for the inherited incumbency advantage is that dominant families in Norwegian politics may tend to occupy safe list positions far away from the cut-off for getting a seat (and are thus outside of our estimation sample). Many of the founding members of dynasties in Norway are not marginal candidates, but rather important movers and shakers in the party organization and leadership. Similarly, dynasty formation may be more likely among MPs who reach higher positions of seniority and leadership in the party. To explore these possibilities, we consider whether candidates in the 1953 to 1981 period who occupied the top-ranked list position, reached higher levels of seniority (measured as total number of terms served), or

were appointed to cabinet during their career were more likely to have a family member serve in the future.

The top panel of Figure 7 shows the fraction of MPs with a family member who won a seat in the future, split by whether the MP was ever the top-ranked candidate on his or her party list. The middle panel splits the sample based on the number of terms served (in the entire postwar period). The bottom panel splits the sample by whether the MP attained cabinet experience during his or her time in parliament.

Figure 7: Fraction of MPs with Future Relative in Office, by Top-Ranked, Terms Served, and Cabinet Experience
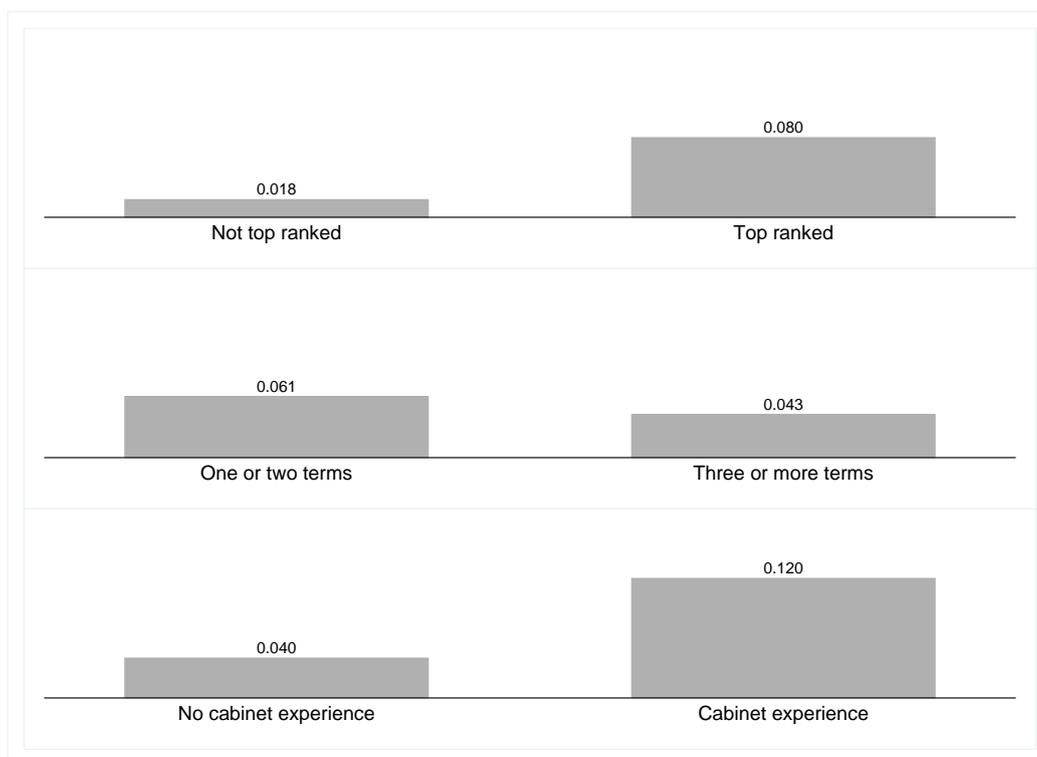
Note: The figure is based on all MPs elected in the 1953 to 1981 period (519 unique MPs). The top panel shows the fraction of MPs with a family member winning a seat in the future, split by whether the MP was ever the top-ranked candidate on his or her party list. The middle panel shows the fraction of MPs with a family member winning a seat in the future, split by the number of terms served (in the entire postwar period). The bottom panel shows the fraction of MPs with a family member winning a seat in the future, split by MP cabinet experience (ever promoted to cabinet, or not—76 MPs had cabinet experience). The dynastic links are based on verified biographical data.

While about 8 percent of MPs who were at any time ranked at the top of their party list during their tenure were followed into national-level politics by a family member, this

Table 2: OLS Regression Estimates of Top-Ranked, Terms Served, and Cabinet Experience

	Family member winning future seat				
	(1)	(2)	(3)	(4)	(5)
Top-Ranked	0.056	0.056	0.054	0.060	0.067
	(0.019)	(0.018)	(0.023)	(0.023)	(0.024)
Terms Served	-0.001	0.000	-0.001	-0.004	-0.004
	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
Cabinet Experience	0.072	0.072	0.076	0.065	0.057
	(0.039)	(0.040)	(0.040)	(0.040)	(0.040)
N	500	500	500	500	500
R^2	0.032	0.082	0.097	0.140	0.160
First Year FE	No	Yes	Yes	Yes	Yes
Party FE	No	No	Yes	Yes	Yes
District FE	No	No	No	Yes	Yes
Controls	No	No	No	No	Yes

Note: Sample restricted to MPs who served from 1953-1981. Columns 2-5 include time fixed effects for the first year in which the MP was ever elected. In Columns 3 and 4, we add party and district fixed effects, respectively. In Column 5, we additionally include ten dummies for candidates' occupations in their first election, as well as a dummy for gender.

is true for just 2 percent of MPs who were never list leaders. Similarly, only 4 percent of MPs with no cabinet experience had a relative follow them into office, compared to 12 percent of MPs with cabinet experience. Table 2 shows that these differences are statistically significant. In line with our RD estimates, we find no statistically significant association between seniority (terms served) and having a future relative in parliament or cabinet.

Our take on these correlations is that cabinet promotion and being list leader may be particularly useful for forming a dynasty, while serving many terms is perhaps not—as we also confirm with our RD results. On the other hand, it is important to consider that the types of politicians who are likely to achieve such high positions in the party and government may *ex ante* possess the qualities (personal character, education, expertise, etc.) that make them valuable to parties. If these qualities are at all heritable, then their family members may be of similar high quality. Since our RD design does not

give variation in cabinet promotion or rank, it is hard to determine the causal effect of attaining these offices on the political success of future family members (cf. Smith and Martin, 2015).

6   Conclusion

Political dynasties are a common phenomenon in many democracies, but the exact mechanisms involved in their perpetuation differ depending on the institutional context. Past research on candidate-centered systems has found that incumbency and length of time in office have an important causal effect on the formation of new dynasties. That is, for a candidate who is more or less equal in other respects (quality, experience, etc.) to another candidate, simply getting into power or returned to power for more than one term can have a significant impact on the future political prospects of that candidate's family members. A key explanation is that incumbency serves as a "power treatment" that increases name recognition among voters, as well as generating connections to financial donors and other important actors.

However, in the party-centered context of Norway, incumbency alone cannot explain the formation of dynasties, nor can length of time spent in office. Our results indicate that Norwegian MPs do enjoy a power-treatment effect for themselves (the incumbency advantage). The implication is that once a candidate is elected, he or she tends to get re-nominated to list positions that are high enough (lower numerically) to secure a seat again in the next election. However, we find no evidence that this effect is relevant for their family members (the inherited incumbency advantage). Most founding members of dynasties seem to occupy privileged positions in their parties that make it difficult to disentangle the treatment of incumbency from other intangibles that make them and their family members attractive to party members and leaders. Moreover, because candidate selection is decentralized to local actors, even the family members of losing candidates may sometimes possess the right connections to jumpstart their political careers.

This null finding for the inherited incumbency advantage in the party-centered context of Norway is both theoretically and empirically important for our understanding of dynasties in comparative perspective. Compared to the larger and statistically significant effects that have been estimated in candidate-centered contexts like the U.S. (6 percentage points) and the Philippines (12 percentage points), our null finding from Norway suggests that incumbency plays a smaller explanatory role in the mechanisms underlying dynastic politics in countries with strong party organizations and party-centered voting, in line with the comparative theory laid out by Smith (2012). This suggests the need for more comparative investigations across different institutional contexts.

Our findings are also relevant to recent research estimating the *economic* returns to office using RD designs. The seminal contribution was made by Eggers and Hainmueller (2009), who find that holding office increases the future financial capital of British MPs. Similarly, Willumsen (2011) finds strong positive income effects in the long term for Norwegian candidates who narrowly win a seat in parliament. Thus, in the Norwegian setting, it appears that narrowly elected candidates *themselves* tend to benefit both politically (the incumbency advantage we have identified), and economically in the long term. However, while it is possible that winning office will create some economic gains for politicians' family members (cf. Folke, Persson and Rickne, 2015), our study provides no support for the hypothesis that incumbency is the key to inheriting *political* success in the party-centered context of Norwegian elections.

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Appendix

Table A.1: RD Estimates Using Proxy Family Ties

Panel A: Family member running (proxy)

	(1)	(2)	(3)	(4)	(5)	(6)
RD estimate	0.054	0.053	0.032	0.049	0.051	0.056
	(0.052)	(0.053)	(0.053)	(0.055)	(0.055)	(0.056)
R^2	0.009	0.027	0.089	0.173	0.178	0.216
N	536	536	536	536	536	536
Bandwidth	0.040	0.040	0.040	0.040	0.040	0.040

Panel B: Family member winning future seat (proxy)

	(1)	(2)	(3)	(4)	(5)	(6)
RD estimate	0.016	0.016	0.012	0.013	0.013	0.018
	(0.014)	(0.013)	(0.012)	(0.014)	(0.014)	(0.015)
R^2	0.002	0.004	0.023	0.070	0.085	0.130
N	605	605	605	605	605	605
Bandwidth	0.047	0.047	0.047	0.047	0.047	0.047
Year FE	No	Yes	Yes	Yes	Yes	Yes
Party FE	No	No	Yes	Yes	Yes	Yes
District FE	No	No	No	Yes	Yes	Yes
Rank FE	No	No	No	No	Yes	Yes
Controls	No	No	No	No	No	Yes

Note: Sample restricted to candidates from the main parties who are less than five percentage points away from the seat threshold. Candidates with one of the top hundred most common family names in Norway are excluded (N=646). The reported RD estimates corresponds to β_1 from Equation (1). In Column 6, we include ten dummies for candidates' occupations in their first election, as well as a dummy for gender. All specifications include separate linear control functions on each side of the discontinuity. Standard errors clustered at the candidate level are in parentheses.

# Figure A.1: Parties' Seat Shares by Election Year
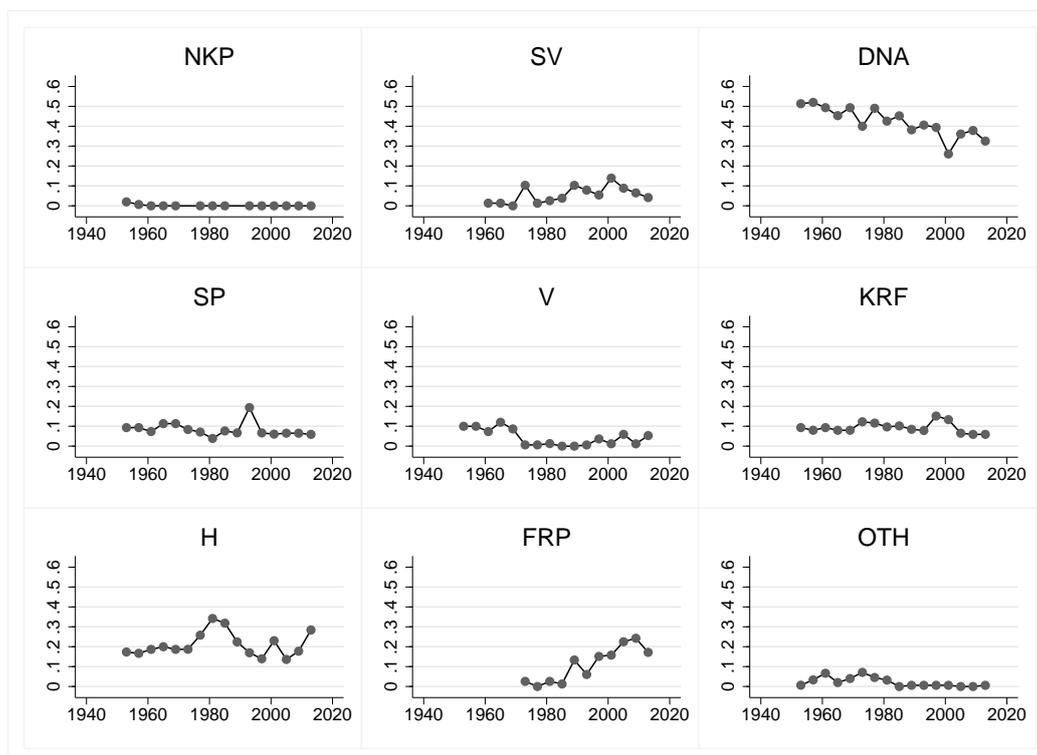
Note: Figure shows the main parties' seat shares by election year. The main parties are: the Labor Party (DNA), the Communist Party (NKP), the Socialist Peoples' Party/Socialist Left Party (SV), the Center Party (SP), the Christian Peoples' Party (KrF), the Liberal Party (V), the Conservative Party (H), and the Progress Party (FrP).

Figure A.2: Number of Candidates by Election Year
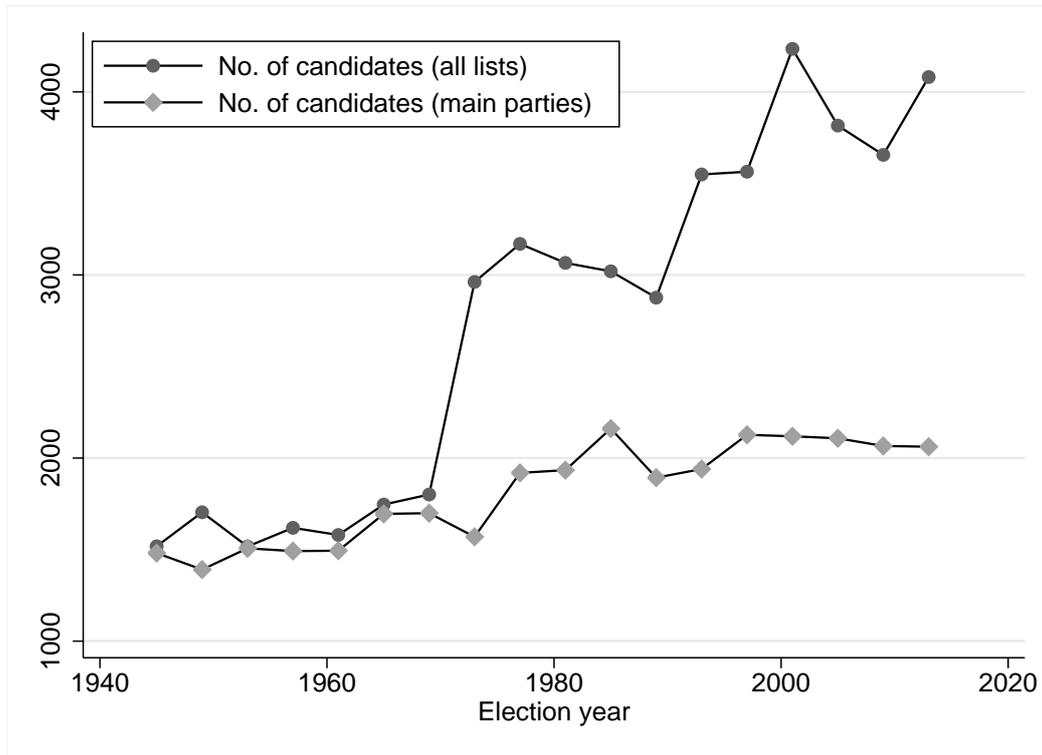
Note: *Figure shows the number of candidates running in each election year. The Labor Party (DNA), the Communist Party (NKP), the Socialist Peoples' Party/Socialist Left Party (SV), the Center Party (SP), the Christian Peoples' Party (KrF), the Liberal Party (V), the Conservative Party (H), and the Progress Party (FrP) constitute the main parties. The number of candidates for all parties is inflated because some minor parties run the same candidates in multiple districts in the same year.*

Figure A.3: Fraction of marginal and safe candidates succeeded by family member, 1945-2013
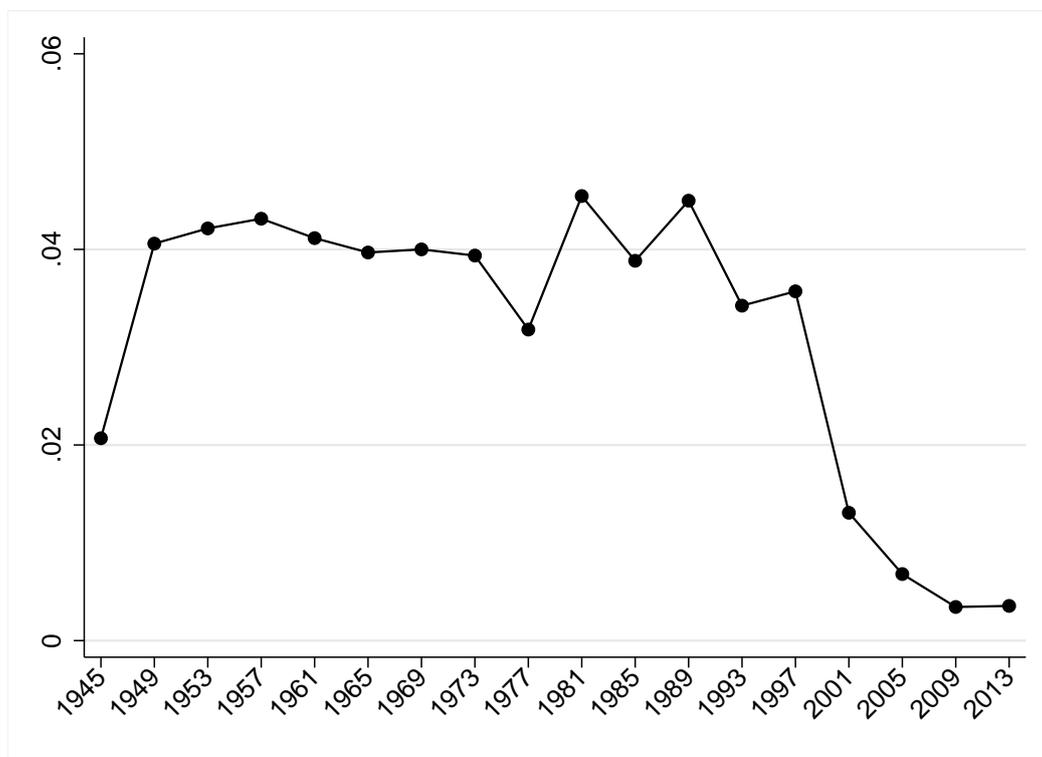
Note: Trend represents the proportion of all marginal and safe candidates in each year who were related to a future elected MP or cabinet minister.

Figure A.4: McCrary Density Test
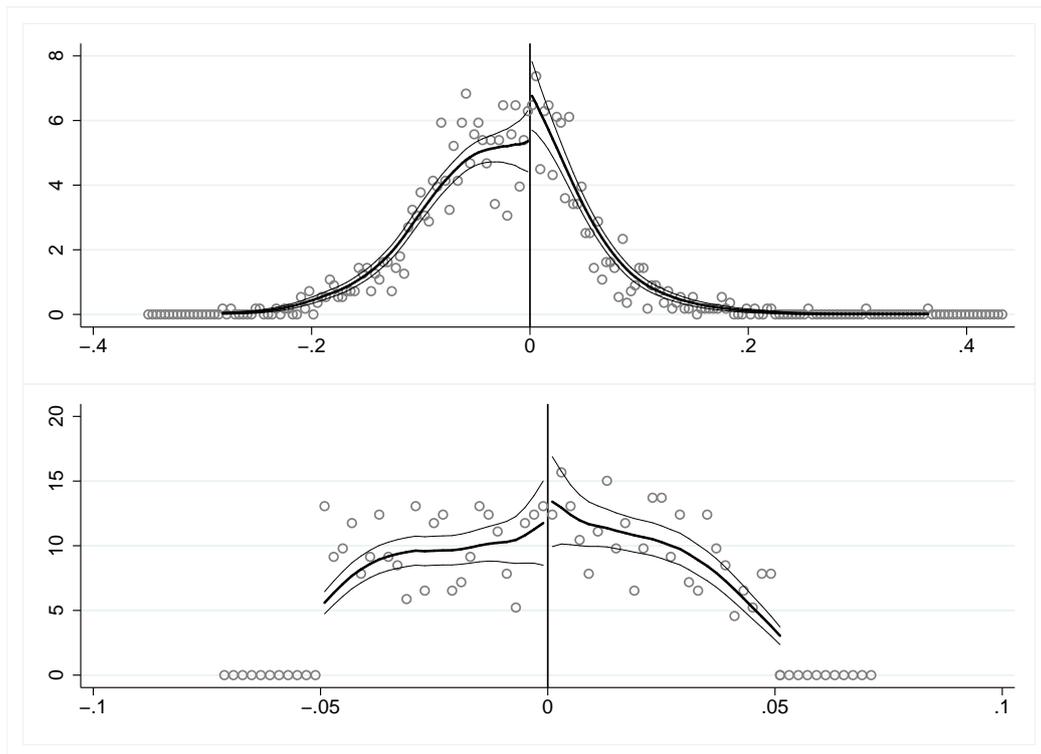
Note: Sample is restricted to all marginal candidates in the top panel (N=1472). In the bottom panel the sample is restricted to candidates who are less than five percentage points away from the seat threshold (N=764).

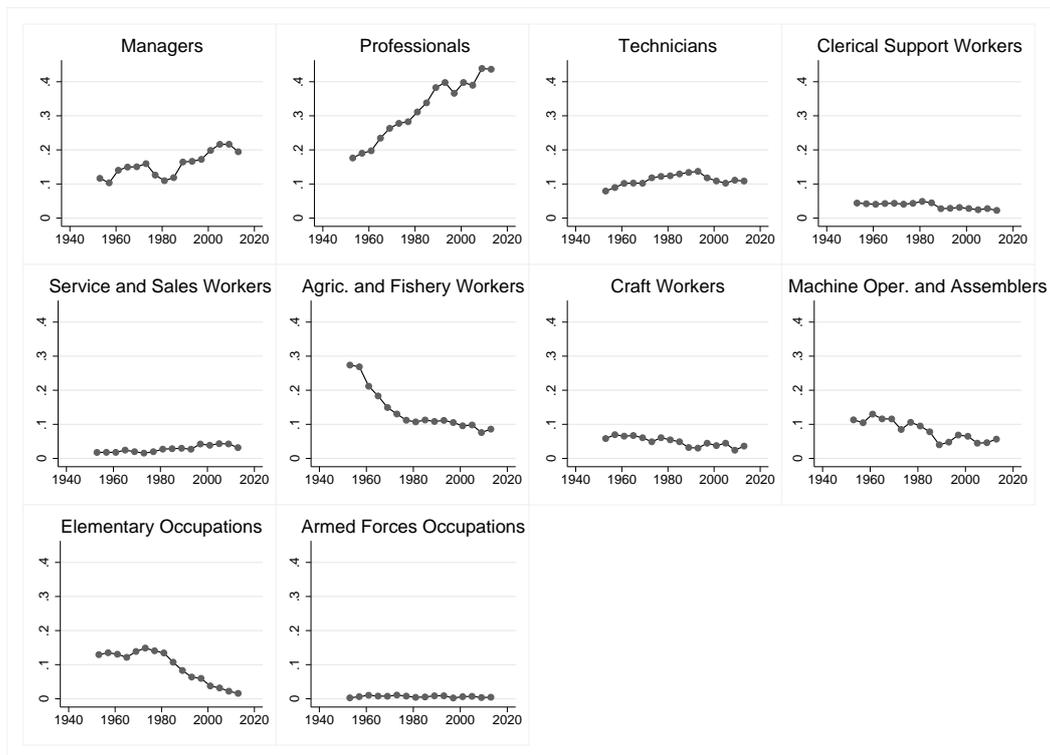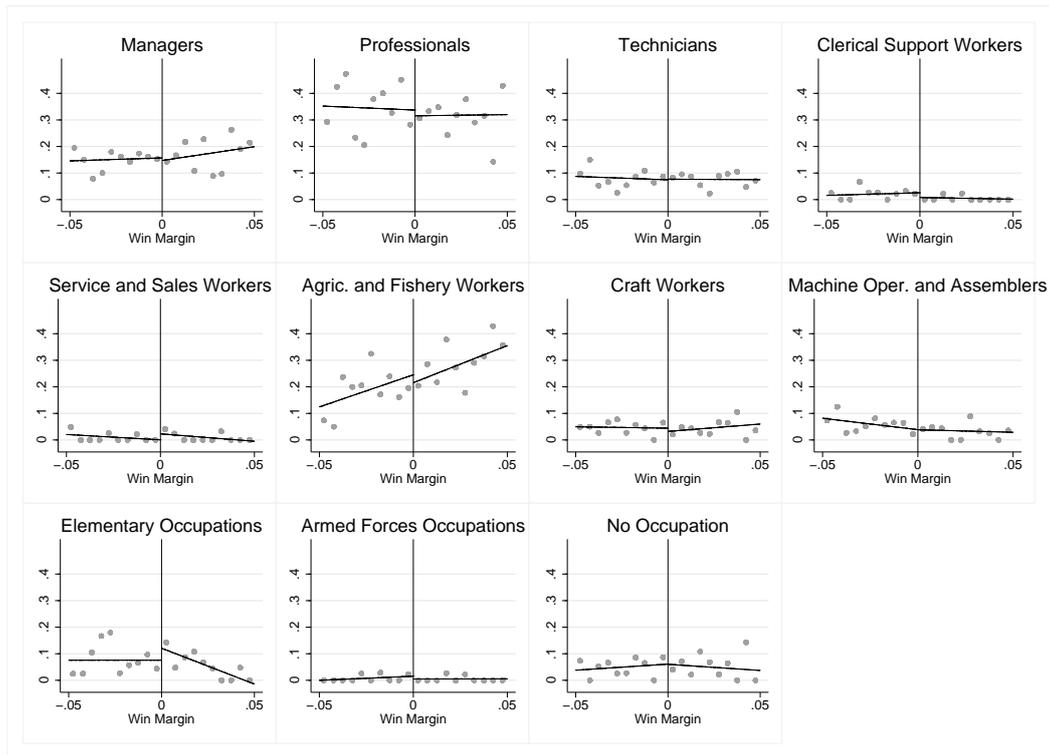# Figure A.5: Incumbency Effect on Downstream Elections
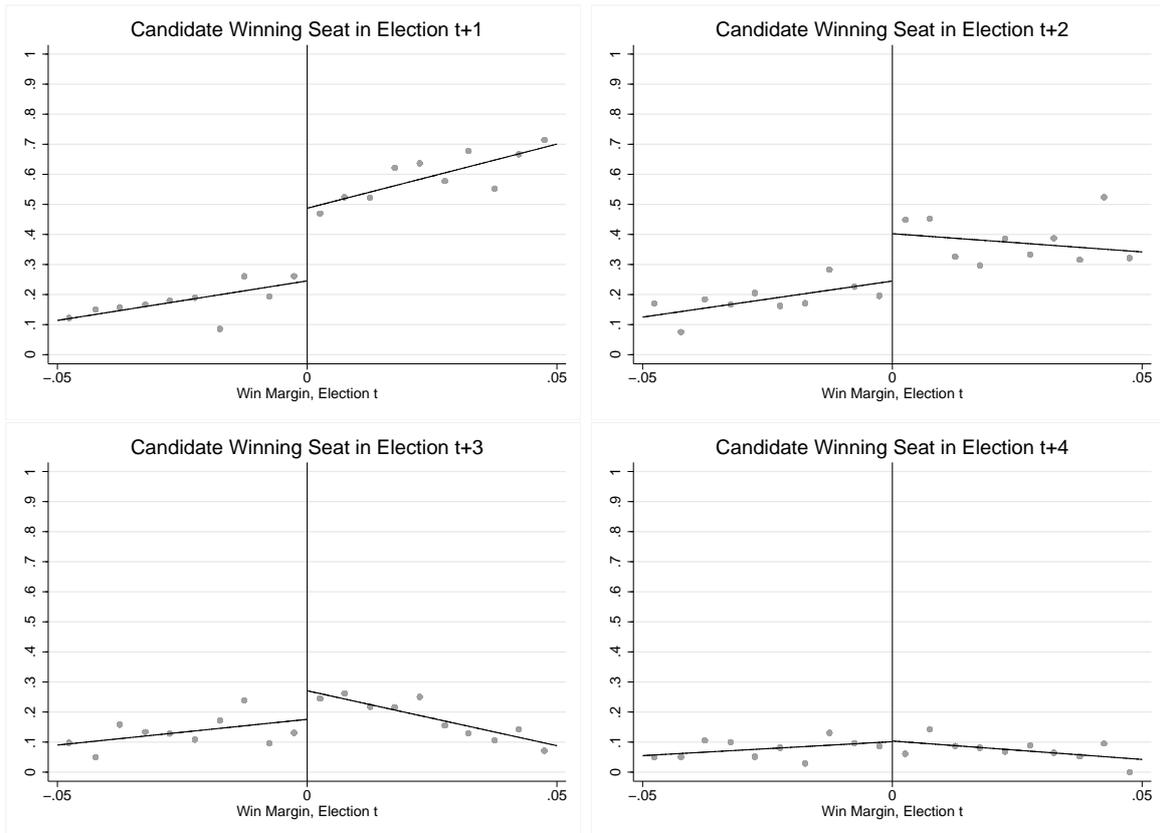
Note: Sample restricted to candidates from the main parties who are less than five percentage points away from the seat threshold (N=764). Each bin is for an interval of half a percentage point. Separate linear regression lines are estimated to the left and right of the discontinuity using the underlying data, not the binned scatterpoints.

Figure A.6: Falsification Exercise: Incumbency Effect on Previous Elections
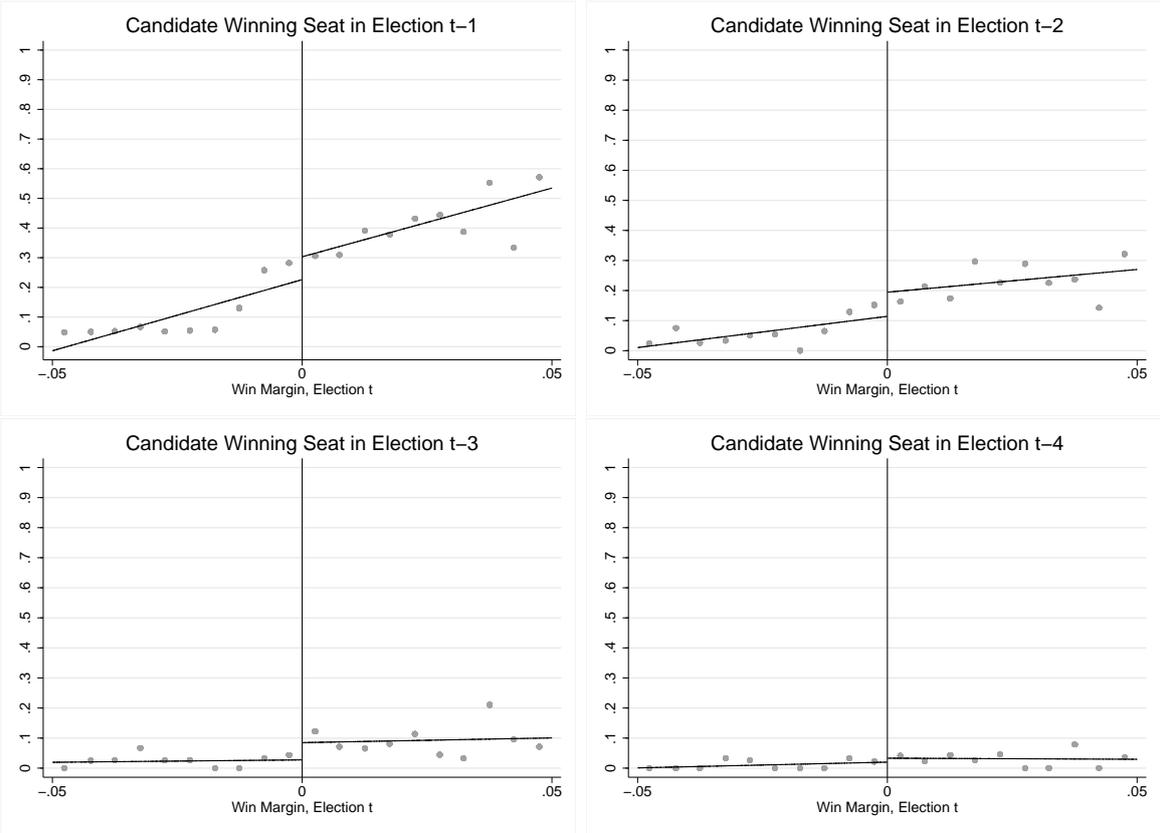
Note: Sample restricted to candidates from the main parties who are less than five percentage points away from the seat threshold (N=764). Each bin is for an interval of half a percentage point. Separate linear regression lines are estimated to the left and right of the discontinuity using the underlying data, not the binned scatterpoints.

## Figure A.7: Candidate Occupations Over Time

Note: Some candidates list more than one occupation; we use both occupations to create the occupation dummies. Candidates with no listed occupation are excluded.

Figure A.8: Balance on Pre-Treatment Variables: Candidate Occupations

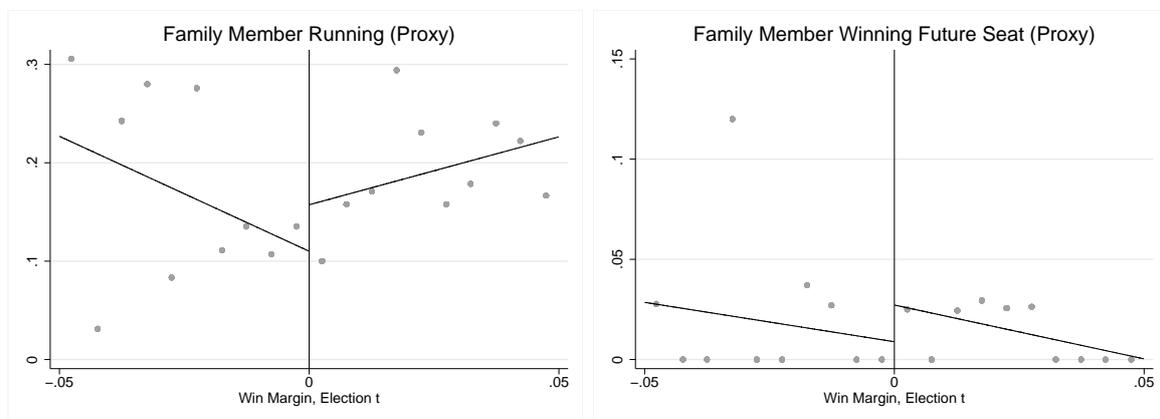*Note: Sample restricted to candidates from the main parties who are less than five percentage points away from the seat threshold (N=764). Each bin is for an interval of half a percentage point. Separate regression lines are estimated to the left and right of the discontinuity using the underlying data, not the binned scatterpoints. The figure is based on candidates' occupations in the first election they participated. Some candidates list more than one occupation; we use both occupations to create the occupation dummies.*

Figure A.9: Probability of (Proxy) Family Member Running, by Common Family Names
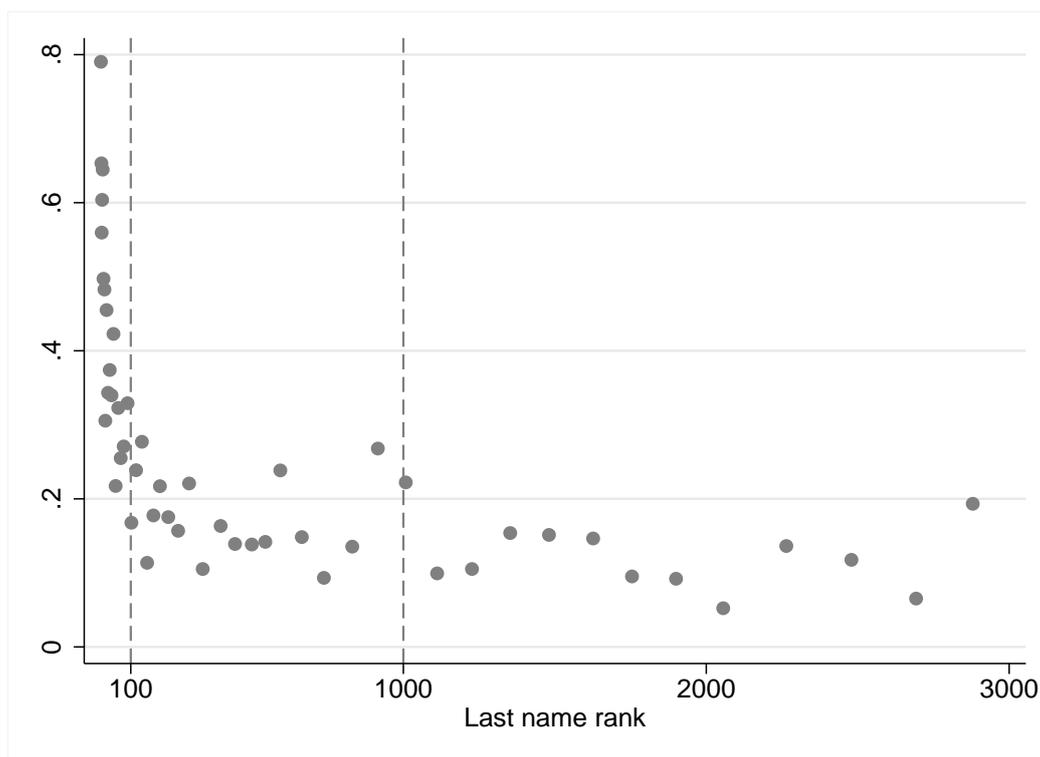
Note: Figure shows the relation between the probability of a family member running in the future (using the proxy based on shared last name, party, and district) and the ranking of prevalence of last names in Norway as of 2013. The last name rank is from Statistics Norway (`https://www.ssb.no/a/navn/alf/etter100.html`). Each bin includes about 150 candidate-level observations. The correlation between the proxy measure and verified ties is 0.30 if no observations are excluded, 0.37 if the top 100 names are excluded, 0.47 if the top 1,000 names are excluded, and 0.48 if the top 3,388 names (i.e., all last names with at least 200 people with that name in Norway) are excluded. Marriages and family members running in different districts or from different parties explain why many verified ties are not captured by the proxy.

Figure A.10: RD Plots Using Proxy Family Ties

Note: Sample restricted to candidates from the main parties who are less than five percentage points away from the seat threshold. In the left panel, the outcome variable is a dummy equal to one if a family member runs in any future election in the same electoral district for the same party. In the right panel, the outcome variable is a dummy equal to one if a family member wins a seat in any future election in the same electoral district for the same party. Candidates with one of the top hundred most common family names in Norway are excluded (N=645). Each bin is for an interval of half a percentage point. Separate linear regression lines are estimated to the left and right of the discontinuity using the underlying data, not the binned scatterpoints.