POLITICAL CONNECTIONS, CAREERS, AND PERFORMANCE IN THE CIVIL SERVICE: EVIDENCE FROM U.S. FEDERAL JUDGES*

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ABSTRACT. This paper analyzes the consequences of political connections in the civil service of the United States. Focusing on the federal judiciary system, where political appointment is the selection method still used today, and leveraging individual-level data on judges and members of Congress from 1789 to the present, we use a difference-in-differences design to compare the careers and performance of judges before and after the senator who recommends their nomination leaves Congress. After losing the connection to their recommender, the probability of a judge being promoted from a district court to a court of appeals decreases by up to 48%. Such impact emerges in years in which judges share partisanship with the incumbent president, hence when they could benefit from the lobbying efforts of their political connection. This event has also sizable consequences on their performance: following the recommender's exit from Congress, judges write fewer judicial opinions, of shorter length, and of poorer quality, as proxied by both fewer backward and forward citations. These results are consistent with judges reducing their effort and productivity once their career prospects are drastically reduced.

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1. INTRODUCTION

On May 6th, 2020, the Judiciary Committee of the United States Senate held a confirmation hearing for Judge Justin Walker, Senator Mitch McConnell's handpicked nominee for the appointment to the D.C. Circuit Court. This happened only six months after Judge Walker received judicial commission in the Western District Court of Kentucky, and was rated "Not qualified" by the *American Bar Association* for such role.[1] Within the U.S. Judiciary – and the U.S. Federal Civil Service, more in general – exceptionally rapid promotions are neither a recent nor a party-specific phenomenon.[2]

These episodes are far from unique (Domnarski, 2009), and raise important questions. How important are politicians in shaping the careers of civil servants? What consequences do political connections have on the overall functioning and performance of the public sector? If political connections are important not only for the initial but also for the subsequent appointments (i.e., promotions) of civil servants, the disruption of such ties can have an *ex ante* ambiguous effect on their productivity. On the one hand, the breakage of political connections may worsen the performance of public sector workers, if they anticipate their career prospects to be over. On the other hand, it may induce them to exert more effort on the job to compensate for the lack of political support. Thus, how political connections (or lack thereof) impact the productivity of public sector workers is ultimately an empirical question.

In this paper, we analyze these questions in the context of the civil service of the United States, focusing on the federal judiciary system, where a highly institutionalized spoils system has been in place for over two centuries. Leveraging individual-level data on the careers and performance of federal judges and congressmen from 1789 to present, we provide an empirical assessment of the role and consequences of political connections between judges and politicians. More specifically, we exploit the exit of senators from Congress as a source of within-judge variation in connectedness. This allows us to establish a causal link between the tenure of senators and the careers and

[1] https://www.nytimes.com/2020/05/04/us/politics/senate-confirmation-justin-walker.html https://www.nytimes.com/2020/06/04/us/judge-justin-walker-nomination-senate.html.

[2] Judge Richard S. Arnold got his seat in the U.S. Court of Appeals for the Eighth Circuit in February of 1980, only fifteen months after being first nominated to the Eastern District Court of Arkansas. On both occasions, he was strongly endorsed by the democratic Senator Dale Bumpers, for whom he had served as both a secretary and a legislative aid for six years. During the hearing for Judge Arnold's promotion, Senator Bumpers declared that "Richard's ability to understand and express complex issues precisely and succinctly is legendary".

performance of the federal district court judges whose appointment they recommend.

Our difference-in-differences and event-study estimates reveal a strong impact of senators' tenure on judges' career prospects and productivity. Consistent with the mechanisms of federal judicial nominations, such impact emerges in years in which judges share partisanship with the incumbent president, and would thus stand to benefit from the lobbying efforts of their senatorial connection. The effects are concentrated on judges with a unique recommender at the beginning of their career, that is, those who simultaneously lose all ties to incumbent senators as their unique connection leaves Capitol Hill.

Namely, following the exit of their recommender, judges experience a 48% drop in their yearly probability of promotion to the U.S. courts of appeals. In light of a baseline probability of promotion of 1.2% in a given year when the president is of the same political affiliation, the exit of recommenders from office essentially shuts the door to a judge's advancement in the U.S. federal judiciary. To explore the consequences of this event on judges' performance, we then investigate the effects of losing the connection on several productivity measures. We find that losing political connections causes judges to write fewer judicial opinions, of shorter length, and of poorer quality, as proxied by both fewer backward and forward citations. These results are consistent with judges reducing their effort and productivity once their career prospects are drastically reduced.

As we document by means of mediation analyses, these effects apply irrespective of the reason for which a recommender exits office, are homogeneous across judges of different quality, and do not significantly vary by partisan affiliation. In other words, patronage dynamics are likely to be key to the careers and the performance of a large number of district court judges.

To bolster the causality of our results, we implement several identification and robustness checks. First, using an event-study design, we document the absence of significant anticipation effects. Second, we tackle potential issues with standard two-way fixed effects estimators highlighted in recent work (Callaway and Sant'Anna, 2020; Imai and Kim, 2020; Sun and Abraham, 2020; De Chaisemartin and d'Haultfoeuille, 2020). After documenting that negative weights are only mildly affecting our baseline estimates, we show that results are largely similar when using the alternative estimator proposed by De Chaisemartin and d'Haultfoeuille (2020).

Finally, as far as the interpretation of our findings is concerned, we explore and rule out one relevant alternative explanation. Namely, we show that the negative effect of losing connections on judges' careers is virtually identical when a recommender is replaced by a senator of the same party. This confirms that personal connections between senators and judges are what shapes the

career perspectives of the latter, as opposed to a generic ideological affinity with incumbent office-holders from their state.

This paper makes several key contributions. First, it adds to the expanding literature on patronage, by studying the effects of this appointment scheme in the context of the federal civil service of a major developed economy. Recent studies (e.g. Xu, 2018; Colonnelli et al., 2020; Gallo and Lewis, 2012) show how patronage appointments can be detrimental for the overall quality and performance of a wide range of organizations. On top of echoing these findings, our results go one step further, by showing that patrons making entry-level appointments can be crucial for determining upper-level nominations, as well. In fact, our analyses reveal that U.S. senators may have a crucial role in the appointment of Court of Appeals judges, even though the Constitution does not give them any role in the nomination process. This links the scholarship on patronage with studies about the effect of promotion schemes on incentives and performance (Bertrand et al., 2020; Ke et al., 2018).

In this strand of scholarship, a contribution that is closely related to ours is Spenkuch et al. (2021), which documents the effects of partisanship on composition and turnover across several U.S. public agencies. Our study differs from theirs in two main respects. First, we focus on the judiciary, a sizable part of the U.S. state apparatus which is not part of the analyses in Spenkuch et al. (2021). Second, rather than looking only at the partisan affiliation of civil servants, our study is primarily interested in the personal connections between individual judges and specific senators.

Our findings also provide insights about the relative merits of different appointment procedures of U.S. high-level officials. A host of studies demonstrate how elected public officials may take suboptimal or unfair decisions due to electoral concerns. This has been repeatedly shown to be the case for elected, state-level judges (see e.g. Huber and Gordon, 2004; Besley and Payne, 2005; Berdejó and Yuchtman, 2013). By showing that appointed judges may also face dramatic changes in their incentives, our study casts doubts about the potential for lifetime nominations to solve issues stemming from electoral cycles.

Finally, this article augments our knowledge of the overall functioning of the U.S. Federal Judiciary, and the factors that concur to shape judicial performance. In this respect, extant contributions have tended to focus on federal judicial bias stemming from judges' party affiliation (Sunstein et al., 2007; Cohen and Yang, 2019) or personal ideology (Schanzenbach and Tiller, 2008). Our study takes a different perspective, and looks at how – through affecting their career incentives – personal connections to specific political officers affect the performance of federal

judges. This arguably advances our understanding of judicial behavior, by considering how incentives may change dynamically through the course of a judge's career.

The remainder of the paper is organized as follows. Section 2 gives background information on the U.S. federal court system, with particular regard to the role of home state senators in the process of nomination of district court judges. Section 3 details the sources and features of our data on federal judges and U.S. senators, as well as the procedure carried out to match them. Section 4 presents the empirical strategy adopted to identify the effects of interest. Section 5 illustrates our main results. Section 6 summarizes the upshots of a battery of sensitivity checks. Section 7 concludes and describes ongoing work.

2. BACKGROUND

Federal courts are in charge of dealing with both civil and criminal cases referred to the potential violation of one or more federal laws. The United States' federal court system consists of three layers: 94 district courts, 13 courts of appeals (also referred to as circuit courts), and the U.S. Supreme Court. Different from state-level judges, who are elected by citizens, federal judges are appointed for life by the President of the United States. However – while formally making the nominations – the president is far from being the only one involved in the process. This is particularly true for the entry-level position in the U.S. federal judiciary, the one of district court judge.

In fact, by a well-established custom, candidates for district court judgeships are put forward by home state senators who are from the same party as the president. Should there be no such senators, the president typically consults with other high-level officials from the state with whom he shares partisanship, such as House representatives (Rutkus, 2016). After vetting the candidate(s) identified by home state senators, the President refers one nominee to the Senate Judiciary committee, which holds a confirmation hearing involving a question and answer session with the candidate.

Following the hearing, the committee reports the candidate to the Senate floor in one of three ways: favorably, unfavorably, or without recommendation. In the overwhelming majority of cases, candidates are reported favorably, and in a relatively quick way.[3] The Senate is then in charge of the

[3]However, longer confirmation times – and occasional rejections of candidates – have been taking place in more recent decades (see Binder and Maltzman (2009)).

final confirmation, which normally takes place by unanimous consent. On top of the U.S. Senate, the only other institution having a say over proposed candidates is the *American Bar Association* (ABA, henceforth), which issues a non-binding evaluation before the nomination is passed on to the Judiciary committee.

Although not enshrined in the Constitution, the practice of accepting names for district judgeships from home state senators has been consistently applied throughout the years, by presidents from all parties. This lead to the association of district court judges with their senatorial recommenders rather than with their nominating president. As effectively summarized by U.S. Attorney General Robert F. Kennedy, "Basically it's senatorial appointment with the advice and consent of the president" (cited in O'Brien (1986)).

Such a practice has not been immune from criticisms, on the grounds that it may favor politically connected candidates over more competent ones. As acknowledged by a U.S. Senator himself, it constitutes an "important source of political patronage" for U.S. senators (Tydings, 1977). Not surprisingly, factors concurring to the identification of candidates by senators include friendship, acquaintance, and family ties, among others (Domnarski, 2009). Furthermore, district judges are often chosen based on their political orientation, and a large majority of them were politically active before being appointed (Carp et al., 2019).

While home state senators are commonly regarded as determining only district court nominations, anecdotal evidence points to their active role in the appointment process of circuit court judges, as well (Domnarski, 2009). Notably, this qualitative evidence is largely corroborated by the official records of Congressional Hearings, which report strong written and oral endorsements of court of appeals nominees on behalf of one or more home state senator. This may imply that they suggest names for direct appointment to the circuit bench from outside the federal court system, or that they favor the promotion of judges that they first recommended for a district court position. The latter type of dynamic – and its potential implications for the performance of U.S. district court judges – are the object of interest of the present study.

3. DATA

In order to study the impact of senators' tenure on the careers of federal judges, we build a novel dataset combining information on the biographies and careers of both U.S. federal judges and U.S. senators throughout the period 1789-2019.

3.1. U.S. Federal Judges Data. Data on judges' careers come from the Biographical Directory of Article III Federal Judges compiled by the *Federal Judicial Center* (FJC), the research and education agency of the judicial branch of the United States Government. The directory includes the biographies of judges presidentially appointed to serve during good behavior since 1789 on the U.S. district courts, U.S. courts of appeals, Supreme Court of the United States, and U.S. Court of International Trade, as well as the former U.S. circuit courts, Court of Claims, U.S. Customs Court, and U.S. Court of Customs and Patent Appeals. The FJC data contain information on the full career of federal judges, with the specific dates of each appointment obtained throughout their tenure.

Data on judges' performance come from CourtListener, a free legal research website containing millions of legal opinions from federal (and state) courts, operated by the non-profit Free Law Project. Currently, CourtListener contains information on 9,032,122 legal opinions from federal, state, and specialty courts, from the 1920s until today.

3.2. U.S. Senators Data. Data on senators are from three sources: the Biographical Directory of the United States Congress,[4] the website voteview.com,[5] and the Roster of Members of the United States Congress compiled by ICPSR.[6] Combining these sources provides us with complete information on the political careers of all U.S. senators, from 1789 to 2019.

3.3. Matching of the Datasets. In the empirical analysis that follows we focus on the sample of federal judges who, over the 230 years of analysis, were ever appointed as district court judges.[7] We follow their career in the district courts until either their promotion, retirement, resignation, or death – whichever occurs first. In doing so, we also record if and when the senator(s) who recommended their nomination left office. To this end, we transform the FJC data into an unbalanced panel at the judge-year level.

In order to identify the senator(s) who recommended the nomination of each federal judge, we match this panel with the data on U.S. senators. In particular, we link each judge to the senator – or

[4]https://bioguideretro.congress.gov.

[5]https://voteview.com/data.

[6]https://www.icpsr.umich.edu/web/ICPSR/studies/7803.

[7]The following categories are not included in our sample: (i) judges appointed in years in which that State did not have any representative in the Senate yet; (ii) judges in the district courts of DC and Puerto Rico.

pair of senators – who, at the time of her nomination date as district court judge, were occupying the seat(s) corresponding to the state in which she was appointed, and who were of the same party as the nominating president.[8]

Finally, given that our treatment of interest is the break of the connection between the judge and her recommending senator, we exclude from our analysis those judges that are appointed in states where there is no senator of the same party as the incumbent president at the time of nomination, since we do not identify any recommender in the Senate to exist in such cases.

The final sample consists of 42,715 judge-year observations, covering 2,155 judges for the time period 1789-2019.[9] Table 1 reports summary statistics for a set of judges' characteristics. Approximately 11% of the individuals in the sample get promoted from a district to an appellate court, after an average of 10 years from the first appointment. Figure 1 displays the number of promotions in each year, which ranges from a minimum of 0 to a maximum of 7. Approximately half of the judges are appointed by a Democratic president, and half by a Republican one.

4. EMPIRICAL STRATEGY

To analyze the effect of connections to senators on the probability of promotion from district court to court of appeals, we start by considering the following regression model:

$$y_{it} = \theta_i + \tau_{ts} + \sum_{j=1}^{2} \beta^j \cdot ConnectionLost_{it}^j + x_{it}'\theta + \varepsilon_{it} \tag{1}$$

where i denotes the judge, t indicates the year, and s the state. The dependent variable, y_{it}, is refers to the outcome for district court judge i in year t. Since a demotion from an upper to a lower level court is not an option, the appointment to courts of appeals is an absorbing state: if promoted, a district court judge drops out of the sample.

$ConnectionLost_{it}^j$ is a dummy variable that takes value 0 if recommending senator $j \in \{1,2\}$ is still in office at year t, and 1 otherwise.[10] For judges who have one connection at the time of

[8]The rationale for this matching procedure comes from the process through which senatorial recommendation of federal judges works, as detailed in Section 2 above.

[9]Due to data limitations, the productivity outcomes are measured starting in 1924.

[10]In the rare cases in which a senator exits Congress temporarily and then enters it again, we consider the judge connected until the year of definitive exit. Results excluding the judges connected to such senators are almost

appointment, the equation will only include the term $ConnectionLost_{it}^{1}$ (such event will henceforth be referred as "unique exit"); for judges who have two connections at the time of appointment, the equation will include both $ConnectionLost_{it}^{1}$ ("first exit") and $ConnectionLost_{it}^{2}$ ("second exit"). Being time-varying, each of these variables starts at 0 and then switches to 1 when the recommending senator leaves office. The underlying hypothesis is that senators in office are particularly relevant for recommending district court judges for appointment to the court of appeals, and that this connection is therefore made obsolete when the senator is no longer in Congress.

x_{it} is a vector of judge-specific time-varying controls, which includes an indicator taking value 1 if, at year t, the president of the United States is of the same party as the one who first appointed judge i, and either a full set of dummies for each year of tenure as a district court judge or judge-specific linear trends.

The β^j coefficient captures the effect of losing the connection with recommending senator j on the career and performance of judge i. The terms θ_i and τ_{ts} are, respectively, judge and state-by-year fixed effects. Finally, ε_{it} is the error term, which is clustered at the recommending senator(s) level, corresponding to the level of the identifying source of variation.

Our main focus is on β^j. Interpreting such coefficient as causal requires parallel trends: absent the exit from Congress of the recommending senators, the careers and performance of judges whose political connections are lost and of those still connected would have evolved on parallel paths. In other words, we assume that, conditional on the controls, there is no other variable which is correlated with both the outcome of interest and our main explanatory variables.

Judge fixed effects take account of the fact that judges may be different in several important, time-invariant characteristics, which are likely correlated with both the tenure of their recommending senators and the judges' outcomes of interest (for example, some unobserved component of their ability). State-by-year fixed effects absorb any potential event affecting all the judges of a given state equally over time, which may be correlated with both the exit of the recommending senators and the judges' careers and performance. Hence, their inclusion ensures that identification is obtained conditional on shocks common to all judges of a given state in each year. Finally, judge's experience fixed effects allow us to non-parametrically account for the time-varying role of experience, which is plausibly correlated positively with both the judge's probability of being promoted and their productivity, as well as the likelihood that they experience the exit of a recommending senator. The omission of one of these sets of controls would arguably lead to a bias in the

identical, and are available upon request.

estimates of the coefficients of interest.

One relevant variation of equation (1) relates to timing. To study how judges' outcomes evolve in the years just before and after the change in $ConnectionLost_{it}^{j}$, we estimate:

$$Promotion_{it} = \theta_i + \tau_{ts} + \sum_{j=1}^{2} \sum_{l=-L}^{L} \beta_l^j \cdot Exit_{i(t+l)}^{j} + x_{it}'\theta + \varepsilon_{it} \tag{2}$$

where $Exit_{it}^{j}$ takes values 1 if recommending senator j exits Congress at year t, and l flags the years either before or after this event, providing a set of time effects leading up and following the transition period (i.e. the exit).

This allows us both to assess the duration of the effect and to check for the absence of pre-trends.

5. RESULTS

5.1. Effect on Promotions. Given the potentially different nature of judges who are recommended by one or two senators – possibly reflecting the more or less fragmented political situation of their home states – and the different number of senatorial exits they can experience, we estimate equations (1) and (2) separately for these two groups of judges.

In Figure 2, the coefficients indicate that the exit of the unique recommender implies a reduction in the judge's probability of promotion by 1 percentage point (approximately a 42–48% reduction compared to the average probability of promotion). As expected, the effects are concentrated in years with a president of the same political affiliation as the judge (Figure 3), when the latter could mostly benefit from the lobbying efforts of their senatorial connection. In both figures, there is no evidence of pre-trends. Even though some of the coefficients after the exit are not statistically significant the 5% level (which is not surprising given that promotions are a rare event[11] and the demanding specification we are estimating), it is reassuring to see that all the coefficients in the right panel display a negative sign after the treatment. This suggests that, although the promotion probability may not decrease immediately, it also never returns to the pre-treatment level. This is

[11] In the sub-sample of the 1,056 judges who have one connection at the time of appointment, we observe a promotion for only 122 of them.

also consistent with the long time that a judicial nomination takes, from the moment in which the candidate is identified by the recommenders to the date of nomination or start of judicial service, which can amount also to two years.[12] In Figure A5 and Figure A6, the results are instead much less clear, and we are not able to reject the null hypothesis of no treatment effect or exclude the presence of pre-trends.

There are several possible reasons why the treatment effects differ substantially across the two groups. First, even if two senators of the president's party are present in a certain state when a judge is appointed, not necessarily both of them take part in the selection process. Therefore, for all such cases, the actual treatment effect would be diluted by the null effect of losing the connection with a senator who is not an actual recommender. By focusing instead on those cases in which only one such senator is in office, the probability of incurring in this type of measurement error is drastically reduced. Second, judges who can only count on one recommender for their nomination may be more dependent on that senator for the progression of their careers as well, hence magnifying the (negative) effect of losing such connection on the subsequent probability of promotion, compared to those who can rely on two senators instead. Finally, and related to the previous point, states that have two senators of the same party as the president may also be systematically different from those with only one (e.g., more voters' support for that party, larger share of judges of that political affiliation who can be promoted, etc.). This can make the role of the recommending senator less crucial for the promotion of district court judges, as well as possibly lead the president to appoint as a court of appeals judge someone who is not already sitting on the federal bench.

Altogether, the results from Figure 2 and Figure 3 provide supportive evidence for the importance of the recommending senator in promoting district court judges to the upper-level courts. In particular, they suggest that such mechanism is prevalent among judges who are recommended by only one senator. For these reasons, such group of judges – i.e., those for which we are able to precisely estimate a treatment effect – will be the focus of the remainder of the paper.

5.2. Alternative Explanations and Additional Results. A possible concern, in light of the results shown above, is whether what matters is really the presence of the recommender in Congress, or if instead any senator from that same party is sufficient. To disentangle the role of the rec-

[12]It is not uncommon that, if a vacancy arises, the senator in office at the time is the one in charge of finding the candidate to fill the position, and that, by the time the nomination process is finalized, that senator has already left Congress.

ommending senator from the one of the party, we augment the baseline model interacting our explanatory variables with a dummy variable that indicates whether in year t and state s there is any senator of the same party of the judge. The results are illustrated in Figure A1. Unsurprisingly, the probability of promotion decreases more when no senator in state s is of the same party as the judge (Panel A), and also the marginal effect (Panel B) is larger in magnitude. However, both pairs of coefficients are negative, statistically significant, and not statistically different from each other. This is once again suggestive of the importance for promotions of the recommending senator, whose absence cannot be replace by any senator of the same party.

It is also worth exploring whether the effect is driven by the connection to senators of one party as opposed to another. Figure A2 shows that this is not the case. The coefficient for Democratic and Republican judges are very similar (Panel A), and the marginal effects of losing the connection are almost identical (Panel B).

In addition, Table A3 suggests that judges of different quality – as proxied by the rating given by the *American Bar Association* – may benefit differently from being connected to their recommender. The coefficients associated to low-qualified judges[13] consistently display a negative sign – suggesting that the probability of promotion after losing the connection decreases more for such judges. However, the coefficients are all imprecisely estimated[14] and none of them is statistically significant. Therefore, we will only cautiously take this as a slightly suggestive evidence of a negative relationship between quality and importance of connection.

Finally, Table A4 shows that there is no statistically significant difference in the treatment effects between judges whose recommending senator exits Congress for an unexpected (e.g., loses the race) vs. an expected (e.g., retirement) reason.

5.3. Robustness Checks In this section, we summarize the upshots of three sets of robustness checks.

We begin by augmenting Equation (1) with a full set of judge-specific linear trends.[15] This allows us to control for any characteristics of each judge that evolve linearly over time, and that

[13] We consider as low-qualified judges those whose ABA rating is either "Not qualified" or "Qualified", as opposed to "Well qualified" or "Very well qualified".

[14] Variation in ABA ratings is generally small, and the information is available only for some of the judges in our sample (756 out of 1,056 judges who have one connection).

[15] This requires removing from (1) the full set of indicators for a judge's years of service in the district court, which were included as a way to control non-parametrically for the effects of judicial tenure.

may correlate with both her chances of being promoted and the tenure of her recommender. As displayed in Table A1 in the Appendix, the use of this alternative specification does not significantly affect our results.

A second, important thing to check is that our estimates are not significantly affected by issues associated with two-way fixed effect estimators. In particular, a recent methodological literature has shown how – in difference-in-differences setting with heterogenous treatment timing – two-way fixed effect estimators are a weighted mean of several average treatment effects (ATTs), some of which may receive negative weights (Callaway and Sant'Anna, 2020; Imai and Kim, 2020; Sun and Abraham, 2020; De Chaisemartin and d'Haultfoeuille, 2020). This, in turn, introduces significant biases and interpretation problems. To address this, using the techniques proposed in De Chaisemartin and d'Haultfoeuille (2020).

First, we use their algorithm to diagnose the extent to which negative weights are actually affecting our baseline estimator for γ in Equation (1). The results of this exercise are very reassuring: of 6,704 ATTs, only 365 (5.8%) receive a negative weight. Also, the treatment effect on the weights does not significantly correlate with the moment at which a judge receives her district court appointment, which is arguably the main dimension along which significant heterogeneities in treatment effects might have been plausible.

Next, to further test the robustness of our results, we re-estimate our event study using the DID_M alternative estimator put forward by De Chaisemartin and d'Haultfoeuille (2020). As shown in Figure A3, the dynamics of our effect of interest closely track those documented in Figure 2 and Figure 3. In other words, there is no significant evidence that our main result is driven by the choice of a specific estimator.

Finally, we exclude subsets of observations to verify how each of them impacts our estimates. Namely, we first repeat our baseline regression several times, each time excluding judges in the district courts of a given State across all years. We then repeat the same process, but each time removing observations referred to one of the forty-three presidential spells covered by our sample. The upshots of these exercises are illustrated in the Appendix, Figure A4. As shown by Panel A, our estimate of γ from Equation (1) is very stable to the exclusion of federal judges from different states. On the other hand, when it comes to excluding periods referred to different administrations, Panel B of Figure A4 reveals that excluding observations referred to Ronald Reagan's spell in the White House (1981-1989) significantly reduces the magnitude of our coefficient of interest. This is consistent with President Reagan's exceptional activism in promoting district court judges: of the

310 promotions in our sample, 33 (10.6 %) took place under his presidency, more than any other president in the history of the United States.

5.4. Effect on Performance. To explore the consequences of (losing) political connections on judges' productivity, we explore the effects on four indicators of judicial performance (Ash and MacLeod, 2015, 2024; Posner, 2008): the number of judicial opinions written in a given year, the number of words in the opinions written, and the number of forward and backward citations. Judicial opinions represent the main output of judges' work, and, similar to academics, judges observe the number of citations to their opinions, and desire more of them. Importantly, citations are not a measure of whether the decision is correct or not. But, on average, more citations means that a case was more useful to future judges.

Figure 4 displays the effect of losing the political connection on the above measures. In all four panels, there is no evidence of pre-trends, and the coefficients indicate a statistically significant negative effect on judges' performance. The drop arises immediately after the senator's exit from Congress and persists for at least six years. In particular, the loss of the connection causes a 13% reduction in the number of judicial opinions written and in the opinions' length, 14% fewer citations received, and 15% fewer citations made. Taken together, these results indicate a decline in both the quantity and the quality of judges' output. In light of the negative effects on the probability of promotion to the courts of appeals, these results are consistent with judges reducing their effort and productivity once their career prospects are drastically reduced.

6. CONCLUSION

In this paper, we have provided evidence that US senators can have a large influence in shaping the careers and affecting the performance of US federal judges. In particular, exploiting the exit of senators from Congress as a source of within-judge variation in connectedness, we have shown that losing the tie to their recommending senator reduces the probability of promotion of district court judges by up to 48%. Consistent with the institutionalized patronage mechanism in place for many federal appointments, such an effect emerges in years in which judges share partisan affiliation with the sitting president, and would thus stand to gain from their personal connection with a senator. Importantly, this event also worsens judges' productivity and quality of output, as proxied by several indicators of judicial performance.

These findings carry important implications for our understanding of the careers and performance of an important category of public sector workers, who have a vital role in the day-to-day functioning of one of the three branches of the U.S. government apparatus. While scholarship has tended to focus on party affiliation and has mostly looked at its impact on sentencing behavior, we have documented how personal connections to specific politicians can affect the chances of judges to access top-level positions within the Federal Court System and be a significant determinant of judges' performance.

In ongoing work, we are analyzing additional productivity and performance measures. The main sources are proprietary data from TRAC (Transactional Records Access Clearinghouse), that allow us to match the identity of the judge to the publicly available records of criminal sentences, and additional records of judicial opinions, from providers such as BloombergLaw.

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TABLES

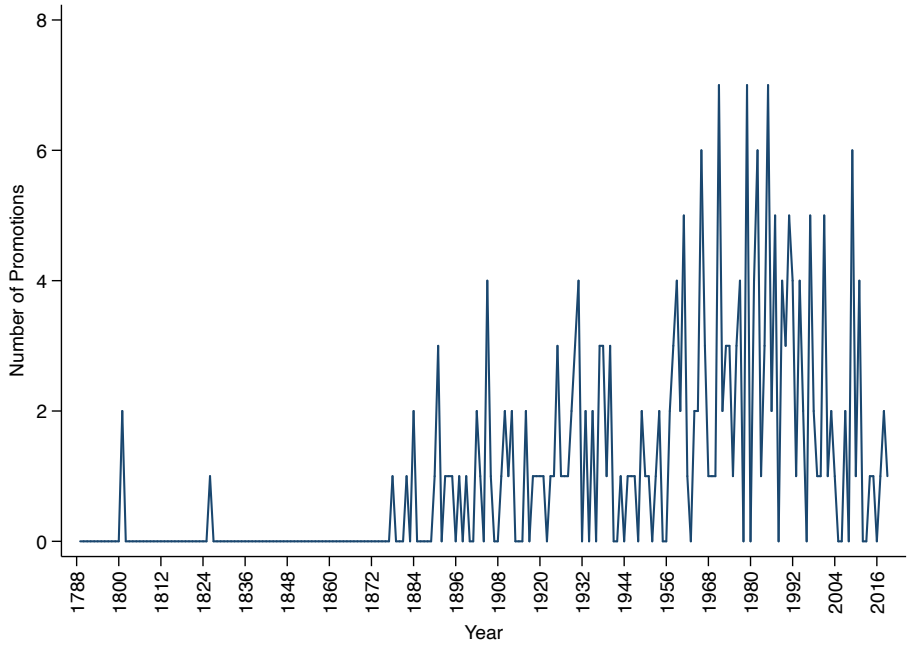
Table 1: Summary Statistics - Regression Sample

	Mean	Stand. Dev.	Min	Max
Panel A. Cross-Sectional Variables				
Ever Promoted	0.106	0.308	0	1
Connections at Appointment	1.510	0.500	1	2
Connections at Promotion	1.467	0.500	1	2
Total Tenure	19.82	12.22	1	56
Tenure at Promotion	9.843	5.932	1	28
Party of Appointment				
Democratic	0.484	0.500	0	1
Republican	0.490	0.500	0	1
Federalist	0.012	0.107	0	1
Jeffers. Republican	0.011	0.103	0	1
Whig	0.003	0.057	0	1
	Mean	Stand. Dev.	Min	Max
Panel B. Time-Varying Variables				
Promoted at Year t (x 100)	0.536	7.302	0	100
Same-Party President	0.530	0.499	0	1
Lost Connection (Unique)	0.631	0.483	0	1
Lost Connection (First)	0.710	0.454	0	1
Lost Connection (Second)	0.407	0.491	0	1
Tenure at Year t	14.18	10.20	1	56

Notes: Panel A only includes judges nominated to district court for a state in which there was at least one senator from the same party as the president at the time of nomination. In Panel B, statistics are computed for the 42,715 judge-year observations part of our sample, as described in Section 3.3.

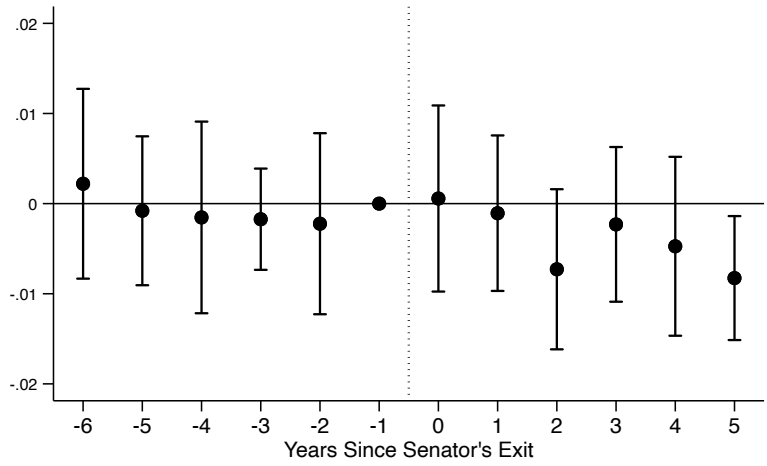
FIGURES

Figure 1: Promotions of District Court Judges in the Period 1789-2019



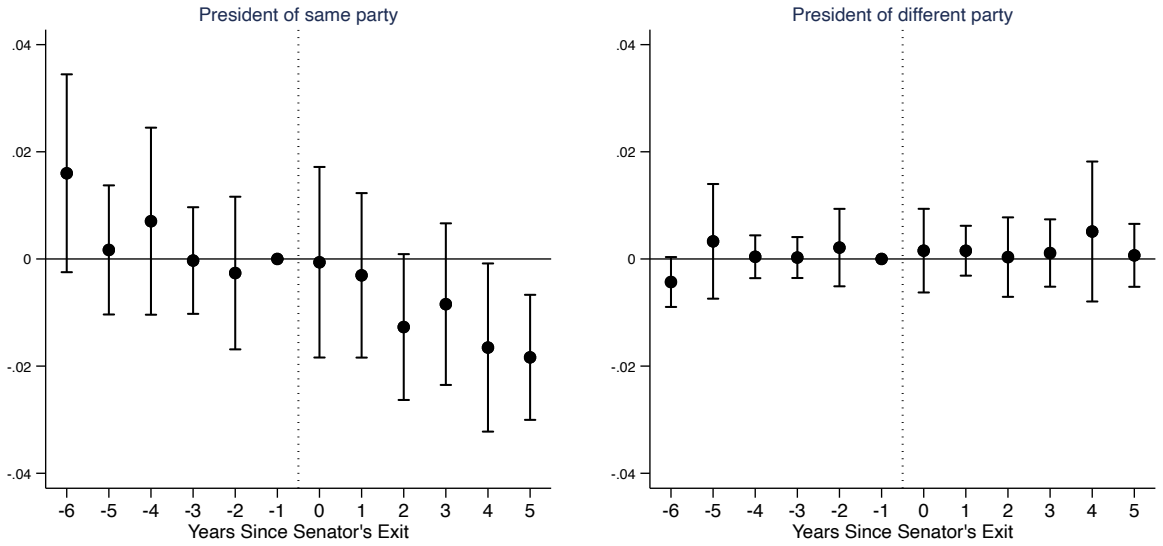
Notes: The figure reports the number of federal district court judges, who are part of our sample as described in Section 3.3 and got promoted to an appellate court, in every year from 1789 to 2019.

Figure 2: Effect on Promotions – Unique Exit



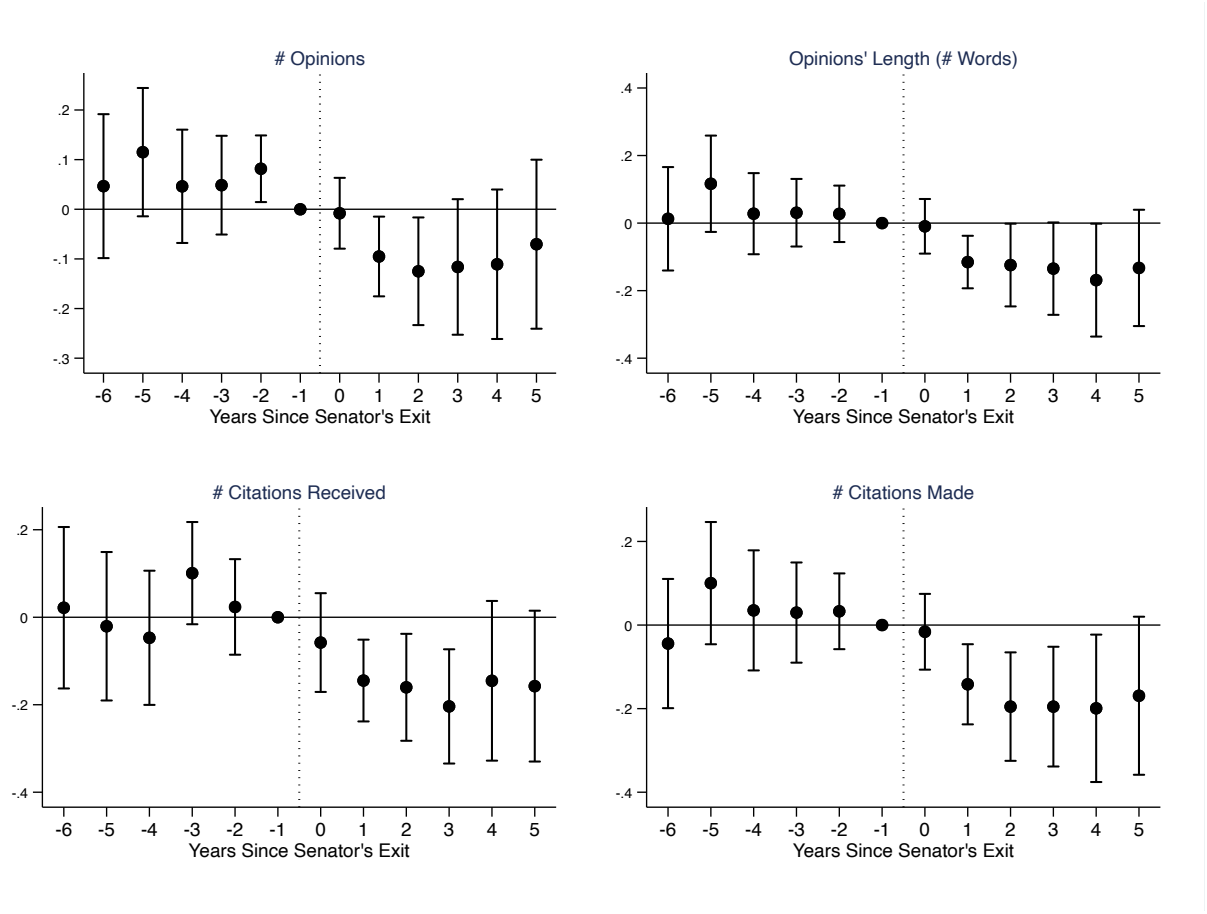
Notes: The dependent variable is an indicator for district judge i being promoted at year t (multiplied by 100). Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending senator level. Regressions include the following sets of FEs: judge, state by year, and judge's experience. This sample includes only district court judges who had one connection at the time of appointment.

Figure 3: Effect on Promotions, by Party of the President – Unique Exit



Notes: The dependent variable is an indicator for district judge i being promoted at year t (multiplied by 100). Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending senator level. Regressions include the following sets of FEs: judge, state by year, and judge's experience. This sample includes only district court judges who had one connection at the time of appointment.

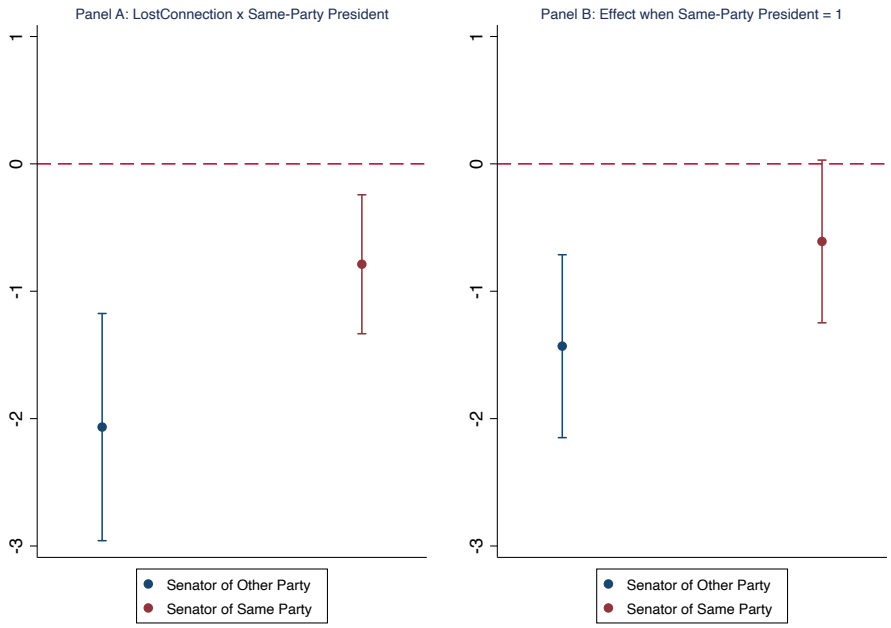
Figure 4: Effect on Performance – Unique Exit



Notes: The dependent variables are the number of opinions written by judge i in year t (top left); the number of words in the opinions written by judge i in year t (top right); the number of forward citations for the opinions written by judge i in year t (bottom left); and the number of backward citations for the opinions written by judge i in year t (bottom right). All coefficients are estimated using Poisson regressions. Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending senator level. Regressions include the following sets of FEs: judge, state by year, and judge's experience. This sample includes only district court judges who had one connection at the time of appointment.

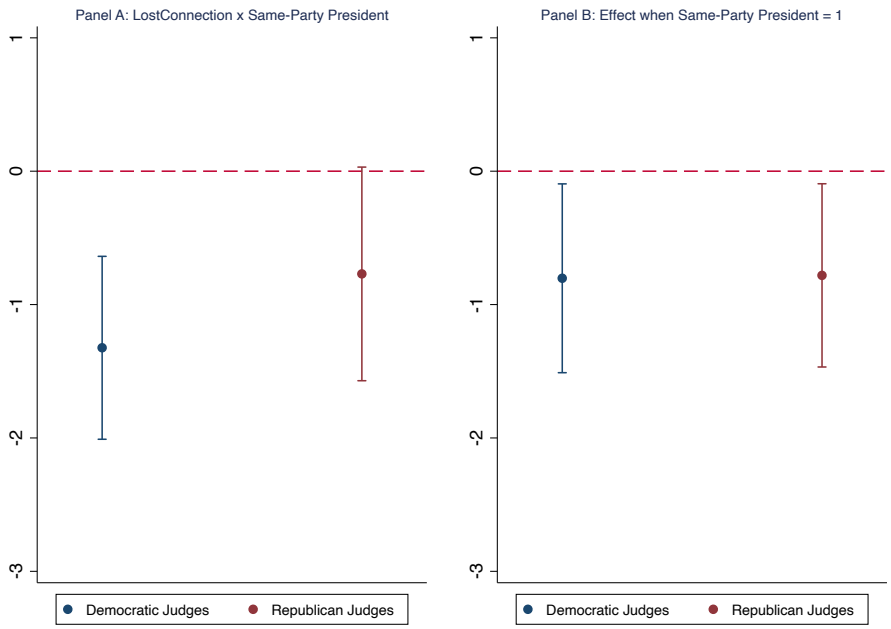
APPENDIX

Figure A1: Recommender vs. Party Connection - Unique Exit



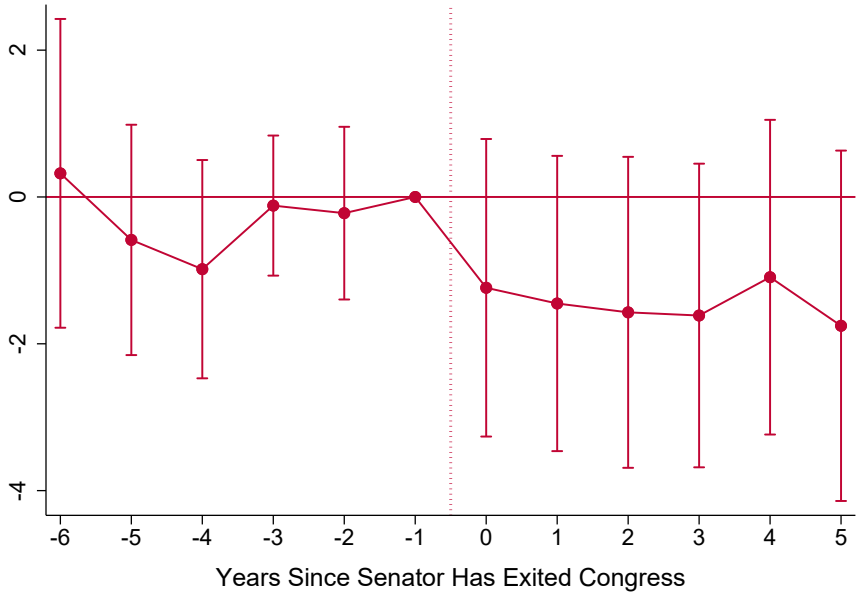
Notes: The dependent variable is an indicator for district judge i being promoted at year t (multiplied by 100). Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending-senator level. Regressions include the following sets of FEs: judge, state by year, and judge's experience. This sample includes only district court judges who had one connection at the time of appointment.

Figure A2: Heterogeneity by Party Affiliation - Unique Exit



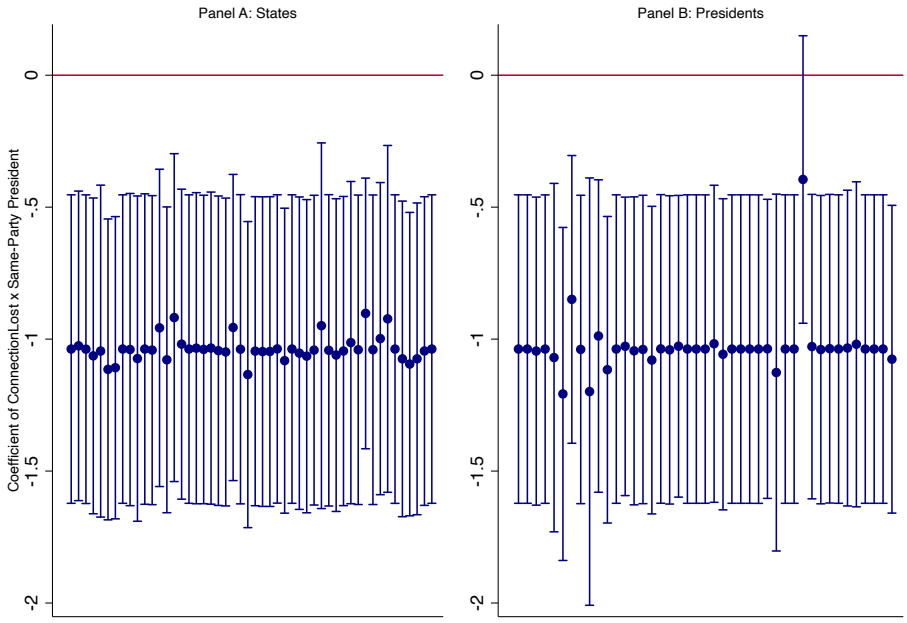
Notes: The dependent variable is an indicator for district judge i being promoted at year t (multiplied by 100). Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending-senator level. Regressions include the following sets of FEs: judge, state by year, and judge's experience. This sample includes only district court judges who had one connection at the time of appointment.

Figure A3: Robustness Checks - Alternative Event Study Using the Methodology for Heterogeneous Treatment Effects Proposed in De Chaisemartin and D'Haltfoeuille (2020)



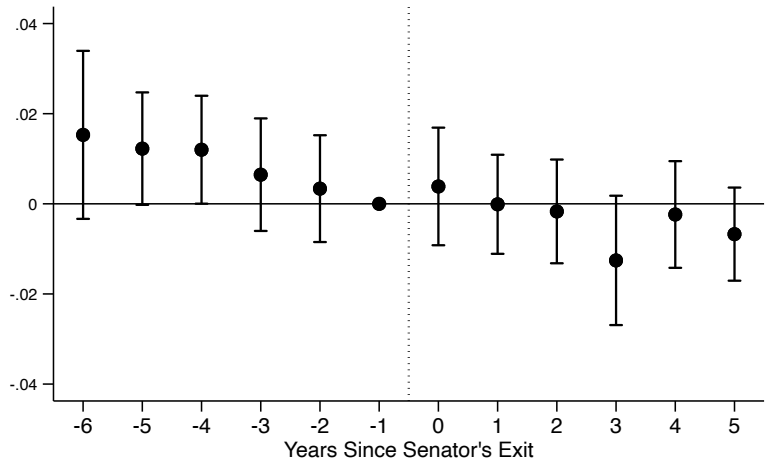
Notes: The dependent variable is an indicator for district judge i being promoted at year t (multiplied by 100). Point estimates for the effect of having lost the connection to the recommending senator when the president is of the same party as the judge, retrieved via the DID_M estimator of De Chaisemartin and d'Haultfoeuille (2020). Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending senator level. Regressions include the following sets of FEs: judge, year, and judge's experience. This sample includes only district court judges who had one connection at the time of appointment.

Figure A4: Robustness Checks: Excluding States and Presidents - Unique Exit



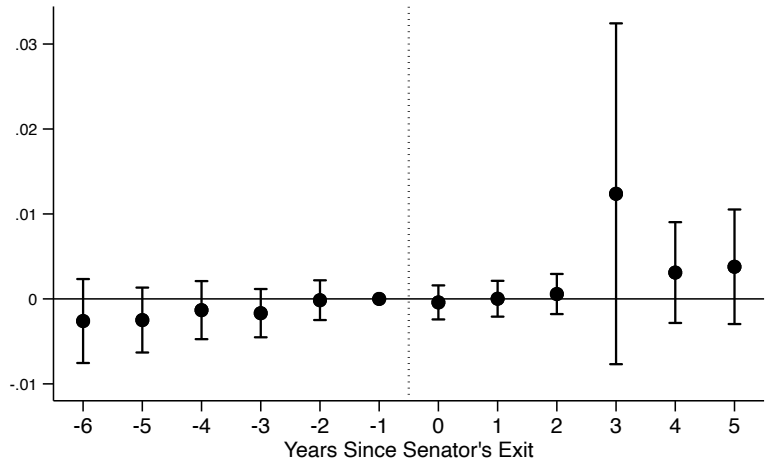
Notes: The dependent variable is an indicator for district judge i being promoted at year t. Point estimates are the marginal effect of losing the connection with the recommending senator when the president is of the same party as the judge. Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending senator level.

Figure A5: Effect on Performance – First Exit



Notes: The dependent variable is an indicator for district judge i being promoted at year t (multiplied by 100). Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending senator level. Regressions include the following sets of FEs: judge, state by year, and judge's experience. This sample includes only district court judges who had two connections at the time of appointment.

Figure A6: Timing of the Effect – Second Exit



Notes: The dependent variable is an indicator for district judge i being promoted at year t (multiplied by 100). Vertical lines are 95% confidence intervals based on robust standard errors clustered at the recommending senator level. Regressions include the following sets of FEs: judge, state by year, and judge's experience. This sample includes only district court judges who had two connections at the time of appointment.

Table A1: Promotions - Unique Exit
Judge-Specific Linear Trends

	(1)	(2)
ConnectionLost	-0.23	0.20
	(0.26)	(0.33)
ConnectionLost × *Same-Party President*		-0.86***
		(0.29)
Same-Party President	0.66***	1.26***
	(0.11)	(0.26)
ConnectionLost +		-0.66***
ConnectionLost × *Same-Party President*		(0.23)
Mean Probability of Promotion		
(ConnectionLost = 0)		
Same-Party President = 0	0.16	0.16
Same-Party President = 1	1.17	1.17
Observations	20,398	20,398
Judge FEs	Y	Y
State × Year FEs	Y	Y
Judge Linear Trends	Y	Y

Notes: In all models, the dependent variable is an indicator for district judge *i* being promoted at year *t*. Coefficients, standard errors and baseline means are multiplied by 100 to enhance readability. This sample includes only district court judges who had one connection at the time of appointment. Standard errors clustered by recommending senator(s) in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A2: Connections and Promotions - Heterogeneity by Partisanship
Unique Exit

	(1)	(2)	(3)
ConnectionLost	-0.12	0.36	0.52*
	(0.27)	(0.28)	(0.28)
ConnectionLost × *Same-Party President*		-1.03***	-1.32***
		(0.30)	(0.35)
ConnectionLost × *Republican*	-0.24	-0.21	-0.53*
	(0.23)	(0.21)	(0.31)
ConnectionLost × *Republican* ×			0.55
Same-Party President			(0.48)
Republican ×			0.26
Same-Party President			(0.55)
Same-Party President	0.77***	1.48***	1.36***
	(0.12)	(0.29)	(0.32)
ConnectionLost(Republican) +			0.02
ConnectionLost(Republican) × *Same-Party Pres.*			(0.33)
Mean Probability of Promotion			
(ConnectionLost = 0)			
Same-Party President = 0	0.16	0.16	0.16
Same-Party President = 1	1.16	1.16	1.16
Observations	20,395	20,395	20,395
Judge FEs	Y	Y	Y
State × Year FEs	Y	Y	Y
Judge's Experience FEs	Y	Y	Y

Notes: In all models, the dependent variable is an indicator for district judge *i* being promoted at year *t*. Coefficients, standard errors and baseline means are multiplied by 100 to enhance readability. This sample includes only district court judges who had one connection at the time of appointment. Standard errors clustered by recommending senator(s) in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A3: Connections and Promotions - Heterogeneity by Rating
Unique Exit

	(1)	(2)	(3)
ConnectionLost	0.09	0.67**	0.47*
	(0.27)	(0.27)	(0.28)
ConnectionLost × *Low ABA*	-0.42	-0.44	-0.04
	(0.28)	(0.29)	(0.30)
ConnectionLost × *Same-Party President*		-1.24***	-0.90**
		(0.31)	(0.35)
ConnectionLost × *Low ABA* ×			-0.71
Same-Party President			(0.48)
Low ABA × *Same-Party President*			0.59
			(0.40)
Same-Party President	0.77***	1.59***	1.31***
	(0.13)	(0.30)	(0.29)
ConnectionLost(Low ABA) +			-0.75*
ConnectionLost(Low ABA) × *Same-Party Pres.*			(0.42)
Mean Probability of Promotion			
(ConnectionLost = 0)			
Same-Party President = 0	0.19	0.19	0.19
Same-Party President = 1	1.09	1.09	1.09
Observations	15,457	15,457	15,457
Judge FEs	Y	Y	Y
State × Year FEs	Y	Y	Y
Judge's Experience FEs	Y	Y	Y

Notes: In all models, the dependent variable is an indicator for district judge *i* being promoted at year *t*. Coefficients, standard errors and baseline means are multiplied by 100 to enhance readability. This sample includes only district court judges who had one connection at the time of appointment. Robust standard errors clustered by recommending senator(s) in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A4: Connections and Promotions - Heterogeneity by Type of Exit
Unique Exit

	(1)	(2)	(3)
ConnectionLost	-0.12	0.35	0.41
	(0.26)	(0.25)	(0.27)
ConnectionLost × *Same-Party President*		-1.03***	-1.13***
		(0.30)	(0.36)
ConnectionLost × *Unexpected*	-0.23	-0.18	-0.31
	(0.26)	(0.25)	(0.37)
ConnectionLost × *Unexpected* ×			0.19
Same-Party President			(0.51)
Unexpected × *Same-Party President*			-0.35
			(0.49)
Same-Party President	0.77***	1.59***	1.31***
	(0.13)	(0.31)	(0.30)
ConnectionLost(Unexpected) +			-0.35
ConnectionLost(Unexpected) × *Same-Party Pres.*			(0.49)
Mean Probability of Promotion			
(ConnectionLost = 0)			
Same-Party President = 0	0.16	0.16	0.16
Same-Party President = 1	1.16	1.16	1.16
Observations	20,395	20,395	20,395
Judge FEs	Y	Y	Y
State × Year FEs	Y	Y	Y
Judge's Experience FEs	Y	Y	Y

Notes: In all models, the dependent variable is an indicator for district judge *i* being promoted at year *t*. Coefficients, standard errors and baseline means are multiplied by 100 to enhance readability. This sample includes only district court judges who had one connection at the time of appointment. Standard errors clustered by recommending senator(s) in parentheses. *** p<0.01, ** p<0.05, * p<0.1.