



## **The Lure of the Private Sector**

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Egerod, Benjamin Carl Krag

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# The Lure of the Private Sector

– CAREER PROSPECTS AFFECT SELECTION OUT OF THE  
SENATE

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Benjamin C.K. EGEROD<sup>1</sup>

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## Abstract

While it is often conjectured that elected politicians take lobbying jobs to cash in on their political experience, no quantitative evidence has been collected to investigate this proposition. I argue that legislators gauge their own career prospects by observing how successful their former colleagues – who now work as lobbyists – are. I document that when private sector career prospects improve, so does the probability that the average US senator leaves office to take a lobbying job. There is no effect immediately before a senator's pension scheme improves, and senators, who retire from working life after Congress or are elected to a safe seat, are unaffected by private sector career prospects. This indicates that senators react to opportunity costs associated with being in office. Finally, while the results suggest that certain ideological types are more attracted by private sector rewards than others, low turnover in the Senate makes it unlikely that the revolving door has changed the composition of the chamber.

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<sup>1</sup>Department of Political Science, University of Copenhagen. I am very grateful for the comments and suggestions I have received from Sandy Gordon, Jim Curry, Chris Adolph, Jacob Hariri, Anne Binderkrantz, Steven Finkel, Martin Vinæs, Wiebke Junk and Lasse Aaskoven. Remaining errors are my own.

# Introduction

When Jim DeMint (R-SC) in January 2013 resigned from the US Senate, he did so to become president of the Heritage Foundation – a job that, reportedly, paid more than \$1 million per annum. Shortly after this, reporter Carl Hulse met former senator Chris Dodd (D-CT) – who himself had landed an extremely lucrative position as CEO of the Motion Picture Association of America a couple of years previously. When Hulse noted that DeMint might actually be earning more than the senator-turned-Hollywood-executive, Dodd replied "No he's not. I checked" (this exchange is reported in Leibovich (2014, p. 340)).

This anecdote is one of many, which suggests that senators are attracted by lucrative private sector employment and acutely aware of the success other former senators enjoy in their post-elective careers. But despite an abundance of anecdotes and a public discourse that is widely critical of politicians cashing in on their political experience, we have yet to amass systematic evidence that politicians actually leave office, because they are attracted by monetary rewards in the private sector. In this paper, I show that career prospects in the private sector indeed do affect senators' decision to select out of public service. I argue that senators form expectations about how well they would do, if they were to walk through the revolving door, by looking at the success enjoyed by former senators, who currently work in the private sector. When the career prospects become sufficiently appealing, they, too, will leave public service for private sector employment.

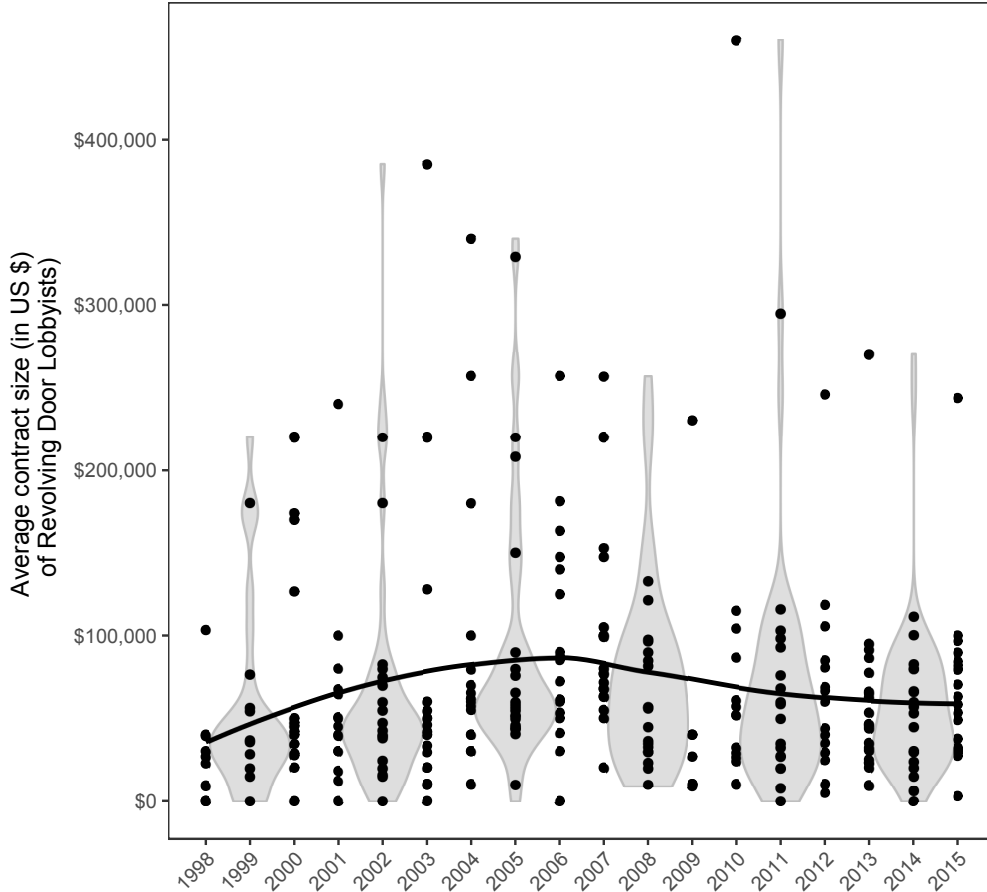
However, it is not immediately clear whom currently serving senators should be comparing themselves to, when they attempt to gauge their own career prospects. There are immense differences in how successful senators are, after they leave office. This is illustrated in Figure 1, which plots the average size of the contracts that senators-turned-lobbyists have worked on over time.<sup>2</sup> Some former senators work on contracts whose value average to almost nothing, while the typical contracts of the most successful senators are worth several hundred thousand.

It is clear that a senator, who is searching for a private sector job, will not get a very good prediction of how well, she can expect to do in a revolving door job, by looking at any given former senator. The global average, too, would only provide her with a noisy prediction. Instead, she has to find former colleagues, who are comparable in some sense, and use their experiences to update expectations regarding her own career prospects.

I argue that employment histories prior to serving in the Senate and committee assignments during their tenure provide good points of comparison. Both pre-Senate careers

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<sup>2</sup>Of course, we have to accept that the average size of lobbying contracts can work as a viable proxy for gauging how successful senators-turned-lobbyists are. I will delve more deeply into this in the methods section.



**Figure 1: Average Contract Sizes for Senators-Turned-Lobbyists.**

*Note: For presentational purposes, seven former senators with average contract sizes above \$1M are excluded. Time trend and year-by-year expectations are estimated using a loess smoother. Violin densities estimated on subsets consisting of three years at the time (1998-2000, 2001-2003 etc.).*

and in-Senate committee assignments are broadly predictive of behavior during Congressional tenure and labor market outcomes afterwards. Thus, I propose that senators will gauge their career prospects by observing senators-turned-lobbyists, who worked in similar jobs before the Senate, or served in a comparable mix of committees during their tenure. When their success increases, the currently serving senator becomes more likely to leave office for a private sector job as well.

To investigate this claim, I have collected data on the pre- and post-Senate career trajectories of senators serving between the 102nd and the 113th Congress. I use hierarchical cluster analysis to group senators together based on how similar a) pre-Senate career trajectories they have followed, and b) the portfolio of committees they have served in. For each of these career groups, I then predict the average size of the lobbying contracts that senators-turned-lobbyists work on. This allows me to capture how successful revolving door senators are in their post-elective careers. When a currently serving senator observes

a former colleague – with a similar pre-Senate career or similar mix of committee assignments – performing better in the private sector, we would expect the probability that she, too, walks through the revolving door to increase.

Importantly, this also provides me with variation in career prospects, which is plausibly exogenous to time-varying individual characteristics of currently serving senators. The allocation of lobbyists to work on specific contracts happens internally in the lobbying companies and is shaped outside the reach of current senators. This makes it unlikely that the characteristics of any given senator will be related to this measure of career prospects in the private sector. Thus, individual-level confounders are less likely to contaminate my results.

I present twoway fixed effects results showing that when the average contract size of revolving door senators increases, so does the probability that currently serving senators – with comparable pre-Senate careers or committee assignments – take jobs with contract lobbying firms. When the average contract size increases by one standard deviation, the probability that a senator walks through the revolving door increases by approximately 3 percentage points. This corresponds to half of the baseline probability and one-third of the effect ending a Senate term. These results are robust to a wide range of different specifications. The argument crucially hinges upon senators taking stock of the opportunity costs to holding office. Therefore, there should be no effect, when these costs are low. I substantiate this by showing that the senators, who leave the labor market after retiring from Congress are unaffected, and that there is no effect immediately before pension schemes improve or among senators, who did not face a serious challenger in the previous election.

Finally, I give a descriptive characterization of the ideological type of senator, who is most affected by the lure of the private sector, and show that it impacts senators differently depending on their ideological type. First, I show that the effect is asymmetric between the parties – among Democrats it is the moderates that are attracted by private sector payoffs, while it is the most partisan of the Republicans that are most likely to walk through the revolving door, when it is most lucrative. Additionally, among Democrats, the senators, who represented their home-state voters best are most strongly affected. Overall, this suggests that the revolving door attracts ‘good’ types among the Democrats at disproportionate rates, while also claiming the most partisan Republicans. Relatively few senators walk through the revolving door in each Congress, which makes it unlikely that private sector career prospects change the composition of the Senate dramatically. Even so, because the effects are concentrated among certain types, private sector rewards could have real political effects on the margin.

In presenting this evidence, I make at least four contributions to the existing litera-

ture. First, I show that monetary incentives in the private sector indeed do shape selection out of public service. We know from previous research that, on average, it is extremely lucrative for legislators to walk through the revolving door (Diermeier et al. 2005; Eggers and Hainmueller 2009; Palmer and Schnerer 2016). This, however, does not necessarily indicate that they leave office, because of high salaries in the private sector.

Second, and relatedly, the very high payoffs legislators face from taking lobbying jobs feeds suspicions that wealthy special interests can offer lucrative employment in exchange for influence on public policy – a main theme in the media coverage of these revolving door arrangements. Furthermore, it is the most basic assumption in the growing literature on the effects of the revolving door on political economic outcomes that officials are motivated by career prospects, when they leave public service for private sector employment (Adolph 2013; Egerod 2017; Parker 2009; Parker and Dabros 2012; Parker et al. 2013; Santos 2006). Given the growing research agenda and media attention, the lack of research examining the role of private sector wages in shaping political careers is surprising. Put simply, if Members of Congress (MCs) were not attracted by career prospects in the private sector, the fear that politicians trade policy to get lucrative employment would be wholly unwarranted. There are at least two reasons why, it would be entirely reasonable to expect this. First of all, a prime role for elections is to further the selection of good, intrinsically motivated politicians (Besley 2006; Fearon 1999; Przeworski et al. 1999). If this selection mechanism is effective, MCs could walk through the revolving door for entirely different and more benevolent reasons (e.g. to "get off the same old treadmill" as Chris Dodd once put it (Leibovich 2014, p. 160)). It would be difficult to reconcile the condemning tone in the public discourse with such a finding. Second, US Senators are generally very wealthy (Carnes 2013), which makes it less likely that they would change careers for an increased salary. Conversely, if they do respond to the lucrateness of private sector employment, offering jobs could potentially be a very powerful tool for special interests to influence public policy.

Third, it is theoretically and empirically well-established that prospective politicians respond to monetary incentives, when they decide whether or not to run for office (Caselli and Morelli 2004; Dal Bó et al. 2013; Diermeier et al. 2005; Ferejohn 1986; Ferraz and Finan 2009; Mattozzi and Merlo 2008; Messner and Polborn 2004). But while the extant literature on adverse selection in political representation has focused heavily on how these incentives structure the selection *into* office (see e.g. Besley (2006) and Przeworski et al. (1999)) far less attention has been devoted to how the same structures can motivate the selection *out of* office. The results I present here suggest that private sector pay-offs can significantly sway politicians away from public service. While the existing literature has predominantly focused on how to design incentives that attract good types into politics,

the fact that effects differ across legislator type suggests that equal considerations should be afforded to making sure that they *stay in* public service.

Finally, this paper is closely related to the literature on the impact of monetary remuneration and voluntary retirement from Congress. Using interview data, Hibbing (1982a), presented evidence indicating that the foregone private sector salaries were a factor in retirement decisions among his 24 interviewees. Relatedly, Congressional salaries (Diermeier et al. 2005; Hibbing 1982b), the profitability of the pension scheme (Hall and Van Houweling 1995), and the possibility of receiving a financial windfall from leaving Congress (Groseclose and Krehbiel 1994) have been found to be important determinants of voluntary retirement. These various kinds of monetary remunerations can be seen as special cases of expected costs and benefits from holding or leaving elected office, which more generally have been found to impact retirement decisions as well. Thus, when incumbent quality is low (Stone et al. 2010), when the possibility of running for higher office opens up (Kiewiet and Zeng 1993; Schlesinger 1966), when faced with a negative mood in the electorate (Wolak 2007), and when Congressional careers stagnate (Hall and Van Houweling 1995; Theriault 1998), retirement is more likely. I add to this literature by providing quantitative evidence that not only political career prospects and remuneration for public service affect the career decisions of politicians – private sector actors can use the promise of lucrative benefits to attract legislators away from public service.

In investigating this, I also add to the growing literature that describes the MCs, who walk through the revolving door (Lazarus et al. 2016). To my knowledge, this provides the first quantitative evidence on how private sector monetary rewards can incentivize legislators to walk through the revolving door. Something that – in spite of the lacking evidence – has almost been taken for granted in the public debate.

## Career Prospects and Political Careers

It is hardly controversial to state that the strength of the labor market – including wages – in a given sector affects the supply of labor, and, thus, the career choices of workers.<sup>3</sup> This also holds true in the political sector. Monetary rewards are important determinants of both selection into (Dal Bó et al. 2013; Ferraz and Finan 2009; Mattozzi and Merlo 2008; Messner and Polborn 2004) and out of (Baturu and Mikheylov 2016; Diermeier et al. 2005; Groseclose and Krehbiel 1994; Hall and Van Houweling 1995; Keane and Merlo

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<sup>3</sup>For instance, Oyer (2008) investigated how wage prospects influence the choice of becoming an investment banker, while Levin and Stephan (1991) links decreases in the strength of the academic labor market to a decline in the quality of researchers. Ryoo and Rosen (2004) show that the labor market for engineers is highly sensitive to demand, and that students do a good job of forecasting future job market trends. Using subjective expectations Schweri and Hartog (2015) show that increases in expected rates of return is positively associated with enrolling in nursing college.

2010) elected office. Alongside these purely monetary gains, legislators are motivated by doing interesting and fulfilling jobs as well as the 'ego rents' that come with high-status employment (Besley 2006; Rogoff and Sibert 1988).

The office holder does not observe the actual distribution of rewards that are available to her in the private sector, however. Instead she makes her career decisions based on expectations (e.g. Levin and Stephan (1991), Oyer (2008), Ryoo and Rosen (2004), and Schweri and Hartog (2015)), which are updated continuously as new information about the actual distribution is revealed (Margolis and Okatenko 2008).<sup>4</sup> In highly stylized terms, we can think of this process as one of bayesian updating (Margolis and Okatenko 2008). After observing how well their former colleagues do in the private sector, politicians update their expectations about how lucrative it would be for themselves to walk through the revolving door. In this way, they are continuously confronted with new information about the opportunity costs associated with holding political office. When the expected reward approaches their reservation price, they enter into a bargaining process with potential future employers, that determines their actual salary.<sup>5</sup>

US Senators – despite being a highly homogeneous group – vary to a significant degree in their abilities, educations, ages and previous careers. As we saw in Figure 1, this is mirrored in an equally large variation in post-elective labor market outcomes. On other non-political labor markets, workers, who are about to enter the labor force, are able to – rather successfully – predict their future earnings by comparing their individual characteristics to those of workers, that are already active (Frick and Maihaus 2016). Therefore, I expect senators to look for former senators, who have similar individual characteristics, and use their post-Senate success to form expectations as to how well they would do, if they were to walk through the revolving door. This requires them to construct reference groups of senators, who share their individual characteristics. I propose two factors on which senators can construct such reference groups: a) the careers, they followed before entering the Senate, and b) committee assignments during their senatorial tenure.

Pre-Senate career paths capture a number of important individual characteristics, and can, thus, provide such a point of comparison. Adolph (2013) argues that career socialization – even long before an official takes office – shape the decisions public officials make, while in office. Specifically concerning MCs, Carnes (2013) has recently shown

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<sup>4</sup>In the broader population, there is ample evidence to suggest that wage expectations – with some caveats (Frick and Maihaus 2016) – are good predictors of actual salaries (Botelho and Pinto 2004; Brunello et al. 2001; Dominitz and Manski 1994; Webbink and Hartog 2004).

<sup>5</sup>The Cahuc et al. (2006) model is one way to conceptualize the dynamic: Already-employed workers engage in job-search, which introduces a three-party bargaining game with the worker, a current employer and a potential employer. Similarly, a senator's potential employer competes with the working conditions offered in the US Congress, which sets the scene for the bargaining between a politician and her future employer.



that the careers legislators followed before being elected to Congress affect their behavior throughout their time in office. Not only do pre-Congress career trajectories impact voting, they also predict the content of the bills MCs propose, how hard they work to see them enacted, and their views of the world, generally speaking (Carnes 2013). This is especially true, when there is congruence between precongressional careers and the focus of the committees MCs are assigned to (Francis and Bramlett 2017). Furthermore, in the broader research on vocational behavior among non-politicians, career choices have been found to be strongly linked to personality traits (Armstrong and Anthony 2009; Armstrong et al. 2008; De Fruyt and Mervielde 1997), which then again are predictive of labor market outcomes (Cubel et al. 2016; Fletcher 2013).

Similarly, the portfolio of committees that senators have been assigned to during their political careers carry information about their political interests, preferences and post-elective labor market outcomes. A large literature has established the institutional prominence of congressional committees (Shepsle 1978; Shepsle and Weingast 1987). Committee membership affords senators the opportunity to have a political impact e.g. by shaping the legislative agenda (Endersby and McCurdy 1996; Schiller 1995). This makes certain committees attractive, because senators can use them to service constituent preferences and attract pork (Berry and Fowler 2016; Lazarus 2010), but personal interests that predate the political career also play a role in which committees senators seek to be assigned to (Bullock III 1985; Fenno 1973; Schiller 1995).

Importantly, however, because of the prominence of committees in the legislative process, special interests are generally highly interested in targeting them in their influence-seeking (e.g. Bertrand et al. (2014) and Hall and Deardorff (2006)). This makes connections to committees an extremely valuable asset for revolving door lobbyists (Cain and Drutman 2014). Consequently, at least for former staffers, the revenues generated by revolvers (McCrain Forthcoming; Vidal et al. 2012) as well as their personal earnings (Hibbing 1982a) are strongly impacted by the committee connections they have made during their career in public service. Because of this, committee assignment is not only personally important for senators, who wish to see their agenda enacted, it is also a valuable asset for them in their post-elective careers.

In a nutshell, both pre-Senate careers and committee assignment during tenure in Senate carry broad information about politician type. Senators with comparable pre-Senate careers and portfolios of committee memberships are likely to behave similarly during their tenure and experience equally lucrative labor market outcomes afterwards. This makes it natural for senators to use these factors to construct their reference groups.

Thus, a senator can look to former colleagues, who are in her reference group – either because followed similar pre-Senate career paths or worked in the same committees – and

use their success to form expectations about how well she might do herself. When this makes her expect larger rewards from walking through the revolving door, the probability, that she will take private sector employment, increases.

## Empirical Strategy

### Measuring Career Prospects

The empirical strategy follows a two step procedure. Each step as well as the expected results are illustrated in Table 1. First, each senator is placed in two distinct reference groups with similar pre-Senate career paths and in-Senate committee assignments, respectively. I then compute the expected dollar size of the lobbying contracts in each of these groups. This serves as my two measures of career prospects. I now turn to elaborating each of these steps.

**Identifying Senator Reference Groups.** I started by computing the proportion of each senator's total career that had been spent working in the following careers: lawyer, independent business owner, politician, academia, management of major company, military, public sector employee, private sector employee. I gathered the data for this from the Congressional Biographical Database.

Similarly, for each senator, I calculated the proportion of her career that had been spent in each of the standing committees in the Senate. For this, I used data on committee assignment in the Senate from 103rd to the 113th Congress collected from Stewart III and Woon (2017). I exclude special committees and leadership positions. Appendix B in the online supporting information (SI) provides data descriptions of time spent in various committees as well as pre-Senate careers.

I then used Ward (1963) hierarchical clustering to group all senators into one of five groups based on their pre-Senate careers, and one of six based on their specific mix of committee assignments in the Senate. In a later section, I test the robustness of this baseline choice of groups by varying the number of clusters extracted from the Ward procedures. The estimates are remarkably stable. The Ward clustering places senators into groups that are most internally coherent, while simultaneously maximizing the differences in careers and committee assignments, respectively, between groups. This fits the intuition in the theory well. In appendix A of the SI, I show diagnostics on the cluster analyses and the model fit of a number of different plausible divisions. In appendix B of the SI, I describe in more detail the data on careers and committee assignments as well as the clusters that are extracted.

**Table 1:** The empirical strategy & expected results

	Reference Group	Expected Post-Elective Success	Career Decision
Former lawyers	$\left. \begin{array}{l} \text{Former Senator}_{1l} \\ \text{Former Senator}_{2l} \\ \vdots \\ \text{Former Senator}_L \end{array} \right\}$	\$150,000	Currently serving senator <sub>1</sub> selects out
Former military	$\left. \begin{array}{l} \text{Former Senator}_{1m} \\ \text{Former Senator}_{2m} \\ \vdots \\ \text{Former Senator}_M \end{array} \right\}$	\$80,000	Currently serving senator <sub>2</sub> does not select out
⋮	⋮	⋮	⋮
Former Career <sub>K</sub>	$\left. \begin{array}{l} \text{Former Senator}_{1k} \\ \text{Former Senator}_{2k} \\ \vdots \\ \text{Former Senator}_K \end{array} \right\}$	$E(\text{success}_s)$	Currently serving senator <sub>s</sub> selects out with $P(\text{select out} \mid E(\text{success}_s))$

*Note: The table illustrates the paper's empirical strategy and the theoretically expected results. Senators are matched into reference groups using cluster analysis, illustrated here using pre-Senate careers. The predicted size of lobbying contracts that former senators in reference group K work on, is used to gauge the career prospects of currently serving senator s. E.g. currently serving senator<sub>1</sub> selects out due to an expectation of highly valuable contract sizes in her reference group of former lawyers, while senator<sub>2</sub> stays in the Senate, because of a relatively low expected payoff in her reference group of former military personnel. More generally, the probability that Senator s selects out increases in her expected post-elective success as a lobbyist –  $E(\text{success}_s)$ .*

**Measuring Post-Senate Career Success.** To get an estimate of how successful former senators are in their post-tenure employment, I rely on the average size (in US dollars) of the lobbying contracts they work on. The logic is that the success experienced by senators-turned-lobbyists will be mirrored by value of the lobbying contracts, they work on. Insofar as the most lucrative lobbying contracts represent the most prestigious, interesting and challenging work assignments, and the most highly paid lobbyists are assigned to work on them, this measure of career prospects will capture a mix of salaries and what we can call ego rents more broadly.

Under the Lobbying Disclosure Act (LDA), lobbying companies are obliged to file separate reports for each of their clients, detailing – among other things – the names of the lobbyists who work on the contract as well as its dollar value. Again, this is made easily available by the CRP. I match the names of all former senators who have served in the period 1992-2015 to the names reported on the lobbying contracts. Data under the LDA is available dating back to 1998, and I am able to track the impact of Contract Size on the probability of walking through the revolving door in the period 1998-2015. Since my data on pre-Senate career trajectories includes senators serving since 1992 and on committee assignments since the 103rd Congress, this provides me with data on senators-turned-lobbyists from three Congresses on which to base my initial estimates of Contract Size in 1998. All senators, who have registered as contract lobbyists since then, are of course included in the measure from 1998 and onwards.

Finally, I predict the average contract size in each career and committee group, respectively, for each Congress in the period under investigation. To do this, I use linear regressions with an interaction between group and a set of year dummies. This prediction is my final explanatory variable, which I will call *Contract Size* in the remainder of the text. This mimics the comparison, I expect current senators to make: by looking at the pre-Senate careers or portfolio of committee assignments of senators-turned-lobbyists, they will attempt to predict the average contract size within each year. As former senators start working on more lucrative lobbying contracts, the probability that currently serving senators – who are of similar types – will take lobbying jobs increases.

The correlations between the two measures of career prospects are moderate; .18 and .48, respectively, depending on whether senators are pooled or only within senator variation is used as in the main models. This shows that while they indeed do tap into the same underlying phenomenon, each measure provides information the other does not.

In Figure 2, I show that both measures, indeed, do convey important information about private sector career prospects. First, I plot contract sizes predicted using the senator's reference group (Panels A and B show pre-Senate career and committee mea-

tures, respectively) against realized contract sizes. As illustrated by the linear and loess smoothers, the correlations are substantial. Second, in Panels C and D, I show that the prediction of Contract Size using a Senator's own reference group outperforms the prediction from some other group. I do this, by first computing the correlation between a senator's realized contract size and the contract size predicted for some other group chosen at random. I take the difference between this and the predictive power of a Senator's own group. I bootstrap this procedure with 1,000 resamples. The results show that the estimate of contract size obtained using the Senator's own reference group outperforms estimates using other reference groups.

This validation exercise illustrates two points: first, that the predicted contract size tracks the value of the actual contracts, which senators can expect to work on, if they were to walk through the revolving door. Second, it also shows that it tracks it better than the prediction from other reference groups would have done. Thus, from her reference groups, a senator can extract unique information about her private sector career prospects – not only noise.

While the importance of a senator's committee assignment is well-established, the measure relying on pre-Senate careers is less so. Therefore, as an additional validation of that measure, I show in appendix C of the SI that pre-Senate careers correlate with behavior during tenure and labor market outcomes afterwards.

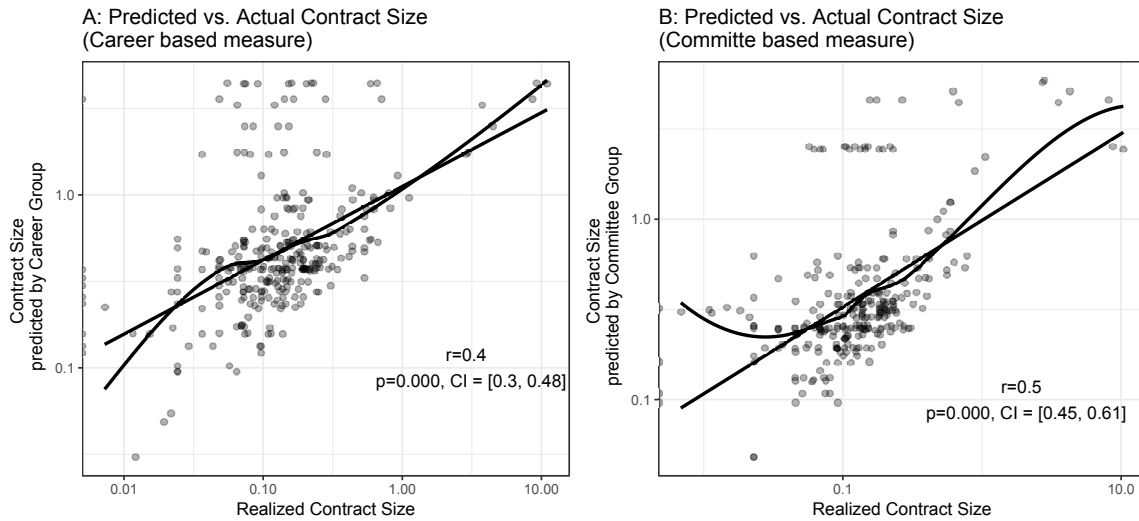
## **Dependent Variable: Walking Through the Door**

The dependent variable is a binary indicator, which takes the value one in the last Congress before a senator leaves office for a private sector job. I count jobs in companies (whether they are lobbying firms or ordinary companies) as well as civil society groups (think tanks, NGOs, universities) as private sector jobs. While I treat these three types of revolving door careers as equal in my main results, I do investigate whether there are different effects of career prospects depending on what kind of special interest, the senator becomes employed with.

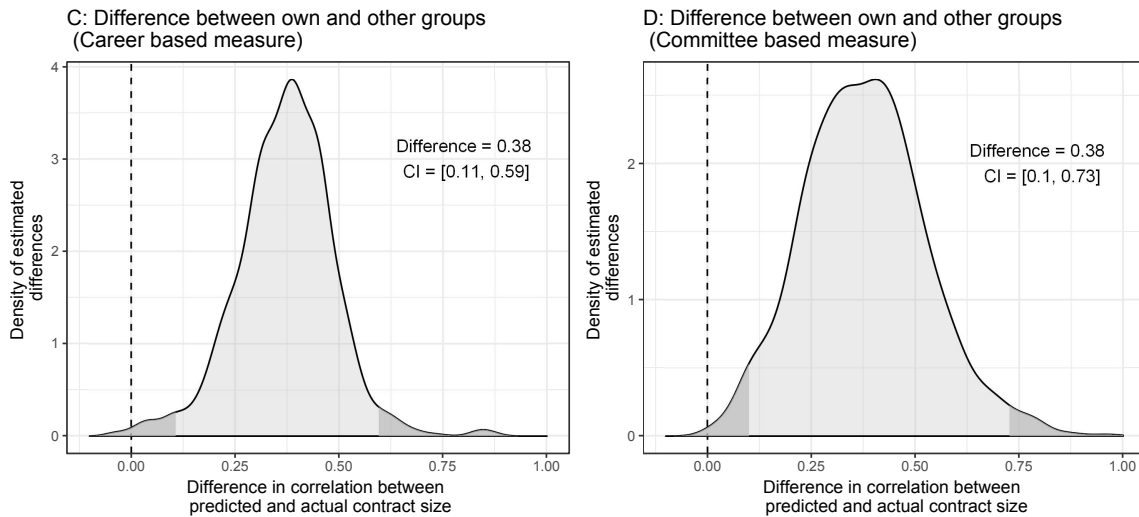
For contract lobbyists, the information for this variable was mainly collected from the Center for Responsive Politics (CRP), which collects its information from the Senate Office of Public Records. For other kinds of revolving door jobs, the CRP records are lacking, however, which is why I supplement with searches in the Securities and Exchange Committee's EDGAR database, the Relationship Science database and by using news stories and Wikipedia searches. Whenever Wikipedia was the main source, I sought to corroborate the information by following the link in the article. If the website was unavailable, I disregarded the Wikipedia information.

In total, 122 senators serving in the 105th to the 113th Congress – of whom 44

**A and B: Estimated Contract Size predicts actual Contract Size**



**C and D: Own group's estimate predicts Contract Size better than other groups'**



**Figure 2: Validating the measure.**

*Note: The top two panels (A and B) show the relationship between Contract Size (predicted using pre-Senate careers and in-Senate committee assignments, respectively) against realized sizes of lobbying contracts. Scales are logged. There is a substantial correlation between predicted and realized contract sizes. The bottom two panels (C and D) plot the bootstrapped (1,000 trials) difference in correlation between realized contract size and Contract Size predicted using the Senator's own reference group and another group. The dashed vertical line shows the sharp null of them predicting actual contract sizes equally well. Areas below the 2.5th and above the 97.5th percentiles are shaded darker than the remaining area. The Senator's own reference group yields a better estimate of contract sizes than using other reference groups.*

leave for a revolving door job in the period of investigation – are included in my models. The full specifications rely on 769 and 722 Senator-Congress observations for the models using on pre-Senate careers and in-Senate committee assignment, respectively, to capture reference groups.

## Additional Covariates

While I go more into detail with my identification strategy below, I now briefly describe a number of additional covariates, I include in the main models. First, I proxy the senator's own political preference by including senator roll call ideal points estimated using the Martin and Quinn (2002) Dynamic Bayesian Item Response Theory (D-IRT) model as its implemented in Armstrong et al. (2014). To measure, whether a senator is in the party's mainstream or on the fringes, I use the absolute difference between the senator's own roll call D-IRT score and her party's median score. I include the first and second order polynomials of this difference measure. If specific types of senators are elected in states with certain political leanings, this could be correlated with how they react to career prospects. I use the Caughey and Warshaw (2015b) measure of state policy liberalism to capture the ideological leanings of the senator's home state. Because general vocational behavior has changed markedly throughout my period of investigation, senators with longer tenures could potentially have systematically different professional backgrounds. If they also have a higher chance of leaving office, this could bias my results. To deal with this, I use the logged number of years the senator has served in the Senate at time  $t$  as a measure of seniority. Conditional on the time fixed effects, this measure is very highly correlated with the senator's age. Thus, it should act as a proxy for both, and I do not include age as a control. My results are robust to doing so, but in many models one of the two variables would drop out due to perfect collinearity. Finally, elections could be a shock to the political system, which could affect private sector earnings, as well as an obvious point in time for a senator to tender her resignation. Therefore, I also include a dummy for whether the senator is up for reelection during the current Congress. This also captures whether the current Congress is the last of the senator's six year term.

Besides the main results, I investigate a number of potential heterogeneous effects. While I describe the data sources for these variables, as they are introduced, all variable definitions and sources are described in appendix D of the SI, which also includes descriptive statistics.

## Identification

The dollar size of the lobbying contracts, that revolving door senators work on, is unlikely to be related to many time-varying individual characteristics of currently serving senators. Still, two identification problems remain. First, specific types of senators are likely to both select into more successful vocations earlier in their careers, and a mix of committee assignments that improve their post-elective career prospects. Second, shocks to the political system could influence both strategic retirement from office and the general size

of lobbying contracts. To deal with this, I include twoway fixed effects.

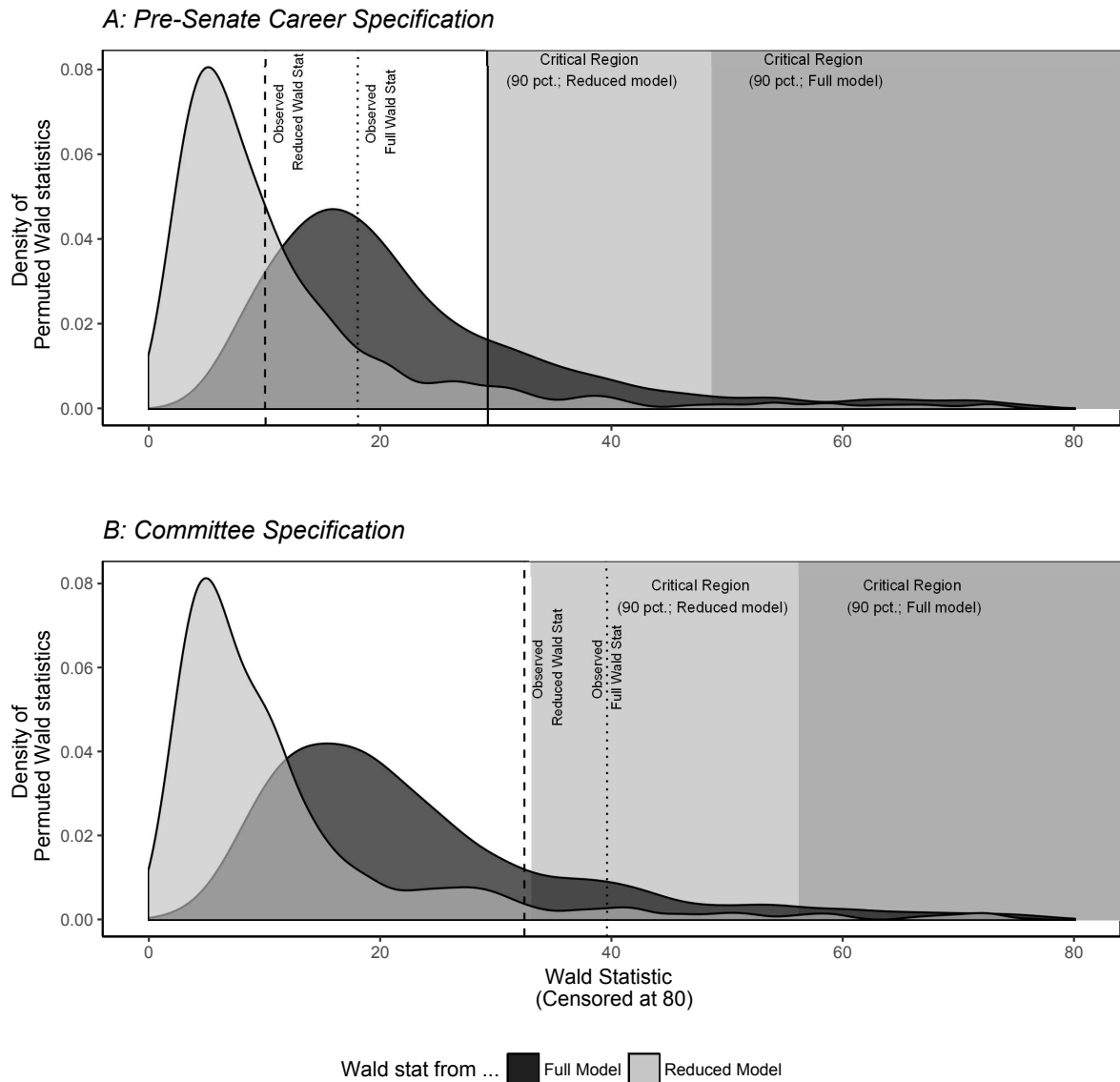
In Figure 3, I show that Contract Sizes are balanced across time-varying individual characteristics of the senators in my sample. The figure presents the Wald statistic from permutation tests (Gerber and Green 2012) regressing Contract Size on a host of predictors as well as twoway fixed effects. I do this for both ways of measuring career prospects (pre-Senate careers and committee assignments in Panels A and B, respectively) and for two model specifications (grey distributions are the reduced models, black distributions add interaction effects).

In the reduced model, I assume the covariates to be homogeneously related to Contract Size across the senator's tenure. As we can see, the observed Wald statistics is far from being statistically significant, when career prospects are estimated using pre-Senate career trajectories to compare senators on ( $p = .4$ ). It is closer to collective significance ( $p$  is just over  $.1$ ), for the models using similar committee assignments to compare senators.

If covariates were differently related to Contract Size during the final Congress in which revolving door senators serve, however, this could be masked by a non-existing relationship during the rest of the tenure. It would still, however, make Contract Size endogenous and bias my results. To alleviate this concern, the full specifications include interactions between a final-term dummy and all independent variables. I still cannot reject that career prospects are unrelated to the individual characteristics of currently serving senators. The  $p$ -values are  $.55$  and  $.18$ , respectively, for the specifications using pre-Senate careers and in-Senate committee assignments to measure private sector career prospects. Even though these balance tests are statistically insignificant, it should be noted that the specifications using committee assignment to compare senators are much closer to significance than the ones using pre-Senate careers.

While these results are not inconsistent with my two measures of Contract Size being unrelated to the individual characteristics of currently serving senators, it is important to note that using pre-Senate careers and in-Senate committee assignment has different relative advantages. Specifically, the measure of career prospects, that is based on committee assignments, should be most closely related to actual behavior of senators, because committee memberships provide a very obvious basis on which senators can compare themselves to each other. However, it is easy to select into a committee based on how well former members of it are doing in their post-elective careers. On the other hand, pre-Senate careers provides a more indirect means for senators to make comparisons, but it provides variation which is more plausibly exogenous, because pre-Senate careers are given, which makes selection highly unlikely. Given these different comparative advantages, if the two measures show the same patterns, it will lend credence to the overall results.





**Figure 3: Permutation Test of Covariate Balance.**

*Note: Each figure shows two distributions of permuted Wald statistics under the null of no relation between Contract Size and any of the controls. Also shown are observed test statistics – dashed and dotted lines represent the observed Wald statistics in the reduced and full models, respectively. Panel A presents results where Contract Size is calculated based on pre-Senate Career Groups. In Panel B, Contract Size is calculated based on committee assignment. Each distribution is from 1,000 permutations. In both cases, I censor the x axis at 80 for presentational purposes. All models include twoway fixed effects. Independent variables in reduced model: roll call ideal points, difference to party median ideal point (first and second order polynomials), seniority (logged), an election year dummy, and state policy liberalism. Full model includes interactions between a final-term dummy and all independent variables. The critical regions are the light (reduced model) and dark (full model) areas above the 90th percentile of the permuted distributions. P-values for specifications using pre-Senate careers to calculate Contract Size: 0.4 (reduced model); 0.55 (full model). P-values for specifications using committee assignment to calculate Contract Size: .1 (reduced model); .18 (full model).*

To estimate the impact of Contract Size on the probability of leaving the Senate for a revolving door job, I run a number of linear probability models. The inclusion of twoway fixed effects simultaneously deals with the risk that some senators behave differently simply, because they are of certain (time-invariant) types, and that homogeneous system-level political shocks drive changes in behavior. Furthermore, it places the specification in the family of difference-in-differences models. The identifying assumption is, then, that the probability of walking through the revolving door would have evolved similarly between treated and non-treated senators, in the absence of a shock to the career prospects of the former. While this assumption may hold, because Contract Size evolves orthogonally to the time-varying characteristics of currently serving senators, it is fundamentally untestable. I discuss this more in a later section and in appendix E1 of the SI.

## Main results

Table 2 presents the results from a number of linear probability models. The first column presents the results without including controls. The coefficient is sizable – I estimate that increasing Contract Size by \$91,000 (which corresponds approximately to a standard deviation) raises the probability of the average senator walking through the revolving door by 3.4 percentage points. This estimate is more than three times the size of its standard error, and the probability that I have found signal in noise is about .001. The sharp null can, thus, be rejected at a high level of confidence.

The balance tests, which I presented previously, did not provide strong evidence against the null. This should not, however, be confused with confirmation that the alternative hypotheses are not true. A different way of providing positive evidence that Contract Size is not endogenous is simply to add controls to the model – if the coefficient of interest does not change (or only changes marginally), this provides an additional indication that the covariates do not proxy sources of selection. In column two, I do this. The coefficient on Contract Size and its standard error are relatively stable. This stability further reassures me that the effect of private sector career prospects is correctly identified.

While the inclusion of Congress dummies soaks up all shocks to the political system, which have homogeneous effects across senators, a major remaining threat to identification is if these shocks have heterogeneous effects. As an attempt to deal with this, I interact all controls with the time dummies in column 3. This allows the effect of Congress-specific shocks to differ depending on the individual characteristics captured by the covariates. As a matter of computational efficiency, I use the Gaure (2013) method to estimate the larger number of interactions between fixed effects and the covariates, and bootstrap point

estimates and standard errors. Once again, the results do not change dramatically.

In the next three columns, I present the results from similar specifications, but use in-Senate committee assignment to estimate the private sector career prospects of currently serving senators. In the fourth column, I run the model with twoway fixed effects. Despite the two measures only being moderately correlated, the estimated effect of private sector career prospects in this specification is close to – but smaller than – the one using pre-Senate careers to compare senators. I estimate that, when the lobbying contracts, which revolving door senators work on, increase by one standard deviation in their value, the probability that currently serving senators will leave office for private sector employment increases by 2.1 percentage points. In column five, I include my full range of controls. This does not change the coefficient on contract size, which remains significant in practical and statistical terms. Finally, in column six, I interact the controls with the Congress dummies. This does not change the results substantively. The bootstrapped standard error is also substantially larger, however.

To gauge effect sizes, it is illuminating to compare this estimate to other coefficients in the model. Depending on the exact model specification, I estimate that the probability of walking through the revolving door is 7 or 8.2 percentage points higher in during election years, i.e. when the senator’s term is ending. Thus, in both of the full specifications, the effect of changing Contract Size by one standard deviation corresponds to more than one-third of the impact of finishing a term. Additionally, looking across Congresses, the average probability of walking through the revolving door is approximately 4.7 – the effect of Contract Size corresponds roughly more than half of this baseline probability.

In appendix E1 in the SI, I conduct placebo tests for pre-treatment trends. While the results based on pre-Senate careers show no trends prior to changes in Contract Size, the results based on committee assignment do. To some extent, this is to be expected. As remarked upon previously, it is easier for currently serving senators to make sure they get seats on the committees that will maximize their post-tenure earnings. This would cause the pre-treatment trends observed here. In a sense, this is both the strength and the weakness of this measure – it sacrifices credible identification for better proxying the manner in which senators actually take stock of their post-elective career prospects. The measure based on pre-Senate careers is not as vulnerable to selection, but is likely to be associated with some measurement error.

Overall, it is reassuring that the estimates from both measures conform as well as they do to each other. Given that the measure, which is likely to be exogenous (the pre-Senate careers measure), yields results that are similar to the measure that best proxies behavior (the committee assignment measure), the estimated effect of private sector career prospects should be credible.

**Table 2:** Pay-off from lobbying and timing of resignation

	<i>Dependent variable:</i>					
				Taking revolving door job		
	DiD	Controls	Shock X covariates	DiD	Controls	Shock X covariates
	(1)	(2)	(3)	(4)	(5)	(6)
Contract Size (Career)	0.034 (0.011)	0.032 (0.010)	0.031 (0.014)			
Contract Size (Committee)				0.021 (0.008)	0.021 (0.006)	0.026 (0.015)
Ideal Points		-0.013 (0.005)			-0.014 (0.006)	
Seniority, Logged		-0.012 (0.023)			0.001 (0.023)	
Difference Party		0.025 (0.016)			0.026 (0.015)	
Difference Party  <sup>2</sup>		-0.004 (0.001)			-0.004 (0.001)	
Election Year		0.070 (0.014)			0.082 (0.012)	
State Liberalism		-0.090 (0.025)			-0.089 (0.029)	
Twoway FE?	Yes	Yes	Yes	Yes	Yes	Yes
Congress X Controls?	No	No	Yes	No	No	Yes
Observations	787	769	769	737	722	722
R <sup>2</sup>	0.067	0.125	0.557	0.062	0.131	0.552

*Note: Dependent variable is SIG Career. Driscoll-Kraay (temporal and cross-sectional) autocorrelation and heteroskedasticity robust standard errors in parentheses in columns 1, 2, 4 and 5. Point estimates in those models are unstandardized OLS coefficients. Bootstrapped standard errors from 500 resamples at the senator-level in parentheses in columns 3 and 6. Point estimates in those models are medians of bootstrapped distributions. Both measures of Contract Size are normalized by their standard deviations.*

## Robustness and further placebo tests

In Figure 4, I show the robustness of my main findings and present a number of placebo tests of the model. Panels A and B show results based on Contract Size estimated using, respectively, pre-Senate careers and in-Senate committee assignment.

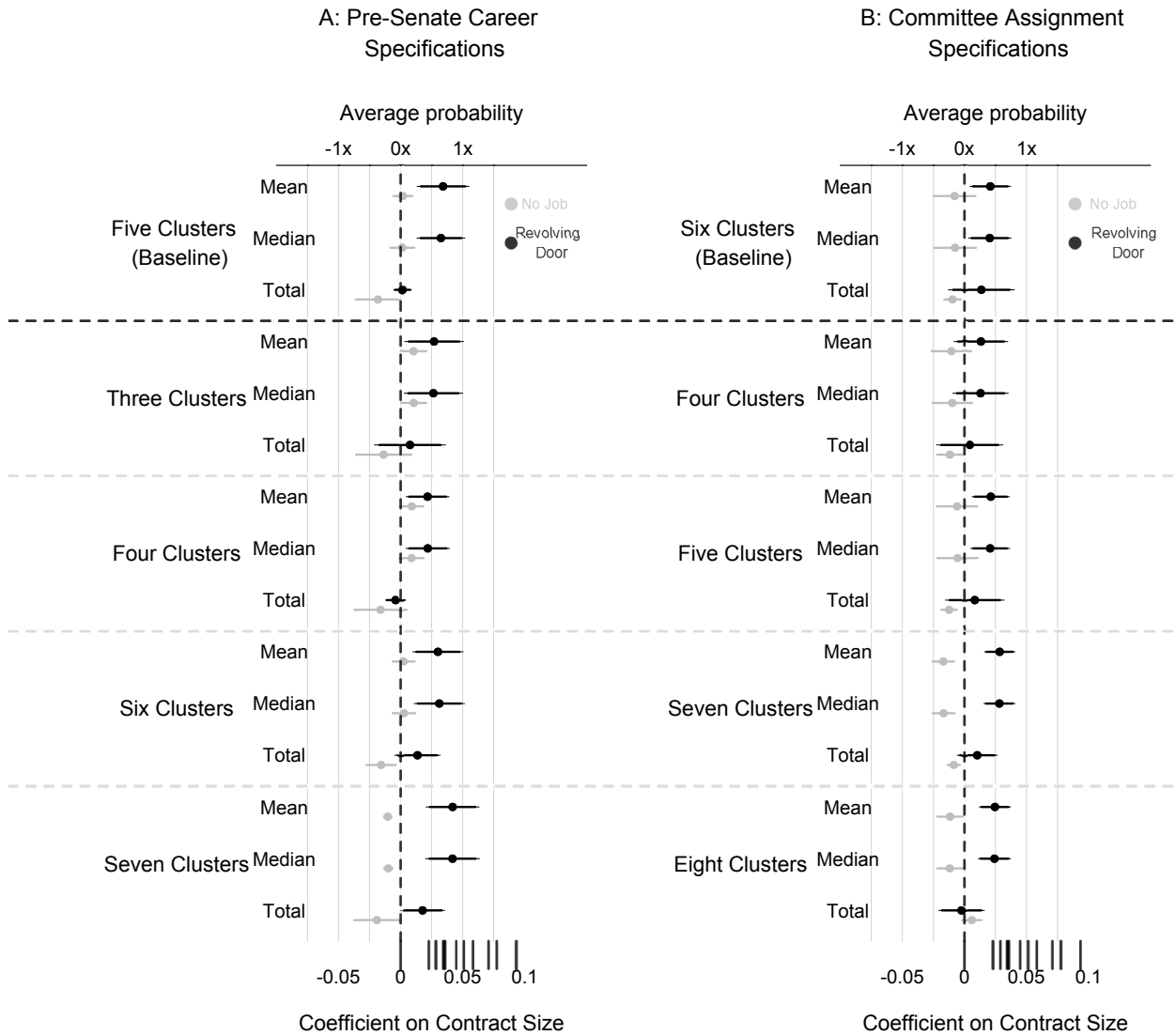
First, I test the robustness of using the average contract size to measure career prospects – as in the main specifications. One way of doing so, is to use the median contract size, which puts less weight on the few extremely large contract sizes. In this way, I deal with the potential problem with outliers, which was shown in Figures 1, where few senators experienced very large average contract sizes. Using the median instead of mean contract size yields remarkably similar results. As a third and final way of measuring career prospects, I use the predicted total contract size in each career group. The results are not robust to this, which might indicate that senators respond to the value of the *typical* lobbying contracts, when gauging career prospects, not the sum of all contracts. This is most likely due to the large differences in the number of contracts that senators-turned-lobbyists work on. If a revolving door senator’s full number of lobbying contracts sum up to a large amount, but she had to lobby for more than a dozen clients in order to put it together, while another former senator only worked on a few highly lucrative contracts to make the same amount, the sum does not contain all information about their respective career prospects. Instead, the typical size of their lobbying contract (measured by the mean or median) will provide the best proxy for how successful they are in their post-elective careers, as it takes into account both the total revenue and the number of contracts worked on to obtain that revenue.

Using cluster analysis to group senators with similar careers or committee portfolios together implies making a somewhat arbitrary decision about the number of clusters to extract. To check the sensitivity of the results towards my baseline choices of five and six clusters, I vary the number of groups to retrieve from the cluster analysis. For the career based measure, I vary the number of clusters from three to seven, and for the committee based measure, I vary it from four to eight. For each number of groups, I present results from using predicted mean, median and total contract sizes. The results are remarkably stable across these different specifications. The point estimates from the models using predicted mean and median Contract Size hardly varies, but remains around .03 and .02 for the career and committee assignment based measures, respectively. Additionally, the probability that I have detected signal in noise remains below .05 in all specifications, except the second of one relying on committee assignments. The coefficient on predicted total Contract Size is remains small in all specifications, and never reaches statistical significance at conventional levels. Overall, however, the main results are robust.

Furthermore, for all specifications, I present the results from a placebo model, where

I regress a dummy for leaving the labor market after retiring on Contract Size. This provides a sanity check of my model: if potential private sector success had the same effect on the probability of leaving the labor market, as it had on the likelihood of taking a private sector employment, it would indicate a problem with the model. Comparing the results from the models with these two different dependent variables is striking. In all specifications, the estimates from models with retirement as the dependent variable are substantively very small, lining up closely around zero, and sometimes enters with a negative sign. Additionally, it is mostly insignificant – statistically speaking.

Finally, in appendix E2 of the SI, I conduct a series of additional robustness checks aimed at dealing with various sources of uncertainty and measurement error. First, and most importantly, because dollar sizes of lobbying contracts vary idiosyncratically, and there is error associated with the cluster analysis, measuring career prospects in this manner inherently induces measurement error, which can pollute my estimated coefficients and standard errors. The relatively low number of senators, who become lobbyists in each group (I show the distributions in appendix B4 of the SI), exacerbate this concern. Since the underlying distribution of contract sizes is known, however, the Method of Composition (MoC) (Tanner 1996; Treier and Jackman 2008) can – under certain assumptions – be used to calibrate the parameter estimates and deal with random measurement error. I implement the MoC technique outlined in Caughey and Warshaw (2017), which does not change the point estimates, but does increase standard errors. The results, however, remain highly significant statistically speaking. Additionally, I conduct a number of robustness checks related to assumptions underlying my uncertainty estimates. I run a number of different models that, respectively, include random effects at the level of the reference group, cluster the standard errors at the senator-level and use the non-parametric bootstrap with resampling at the senator-level. The results are robust to all of these modeling choices.



**Figure 4: Robustness to Specification Choice and Sanity Checks.**

*Note: The figure shows sensitivity of the main results with regard to a) varying the number of career groups extracted from the cluster analysis, and b) estimating the typical contract size using the mean (as in the main specification), median and sum total, respectively. Black and grey points are from models with SIG Career and retirement as dependent variables, respectively. Panel A and B show sensitivity of results using clusters extracted from pre-Senate careers and Senate committee assignments, respectively, to estimate private sector career prospects. Top axes and the corresponding vertical grid lines show the average probability of walking through the revolving door. Bottom axes show coefficient on Contract Size. The rugs show Congress-specific proportion of senators walking through the revolving door. Estimates are from two-way fixed effects LPMs. Confidence intervals are 95 pct. (thin lines) and 90 pct. (thick lines), computed using Driscoll-Kraay panel standard errors robust to within-senator heteroskedasticity and serial autocorrelation as well as between-senator contemporaneous autocorrelation.*

## Testing the mechanism: Opportunity costs to holding office

The turning point in the argument presented here is that elected politicians constantly are confronted with information about the potential pay-off to taking private sector employment. In this way, they are forced to take stock of the opportunity costs to holding office. Opportunity structures, however, vary between senators and over the course of the tenure of each individual – some might have a network, which makes them particularly influential, others might be at a specific point in their tenure, where they would give up certain perks by leaving office. If the argument presented here is correct, the senators, who have the most to gain from staying in office, should not be affected by private sector career prospects.

To test this, I run subset analyses based on a number of variables that are likely to capture the proposed mechanism. To do so as efficiently as possible, I use the Hainmueller et al. (2016) binning estimator and estimate effects within tertiles of these variables. The results are presented in Figure 5. Panel A presents results for pre-Senate career based measure of Contract Size, while Panel B shows the ones for the committee assignment based measure. Gray dotted lines separate each different specification.

In the first specification, I exploit the fact that the retirement scheme for MCs becomes significantly more lucrative at specific points in their tenure. After serving five years in Congress, members are eligible to receive full pension, when they reach 62 years of age. When they have served for twenty years, full pension is available at the age of 50, while members serving for more than 25 years can receive a full pension at any age. I compute the number of years until each senator’s pension scheme improves,<sup>6</sup> I estimate local effects within each tertile. This separates a) those who will never see another improvement, from those who will see one within b) three c) and ten years, respectively. The results show that the effect of Contract Size is driven by the senators, who are not about to a hike in the lucrativeness of their pension scheme. Both for the pre-Senate career and committee assignment specifications, there is no discernible effect of Contract Size, when there are few years until the senator’s pension scheme becomes more lucrative. The point estimates are very small (0.01 and -0.003) and statistically insignificant at conventional levels. Among senators, who will never see another improvement, the effect is considerably larger than the average effect, and the p-value for the difference in effects is .05 and .04 for the specification in Panels A and B, respectively. For those with ten years until their pension scheme improvement, the impact of Contract Size is about the

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<sup>6</sup>This means that senators, who will never receive another improvement, have negative values on the variable.



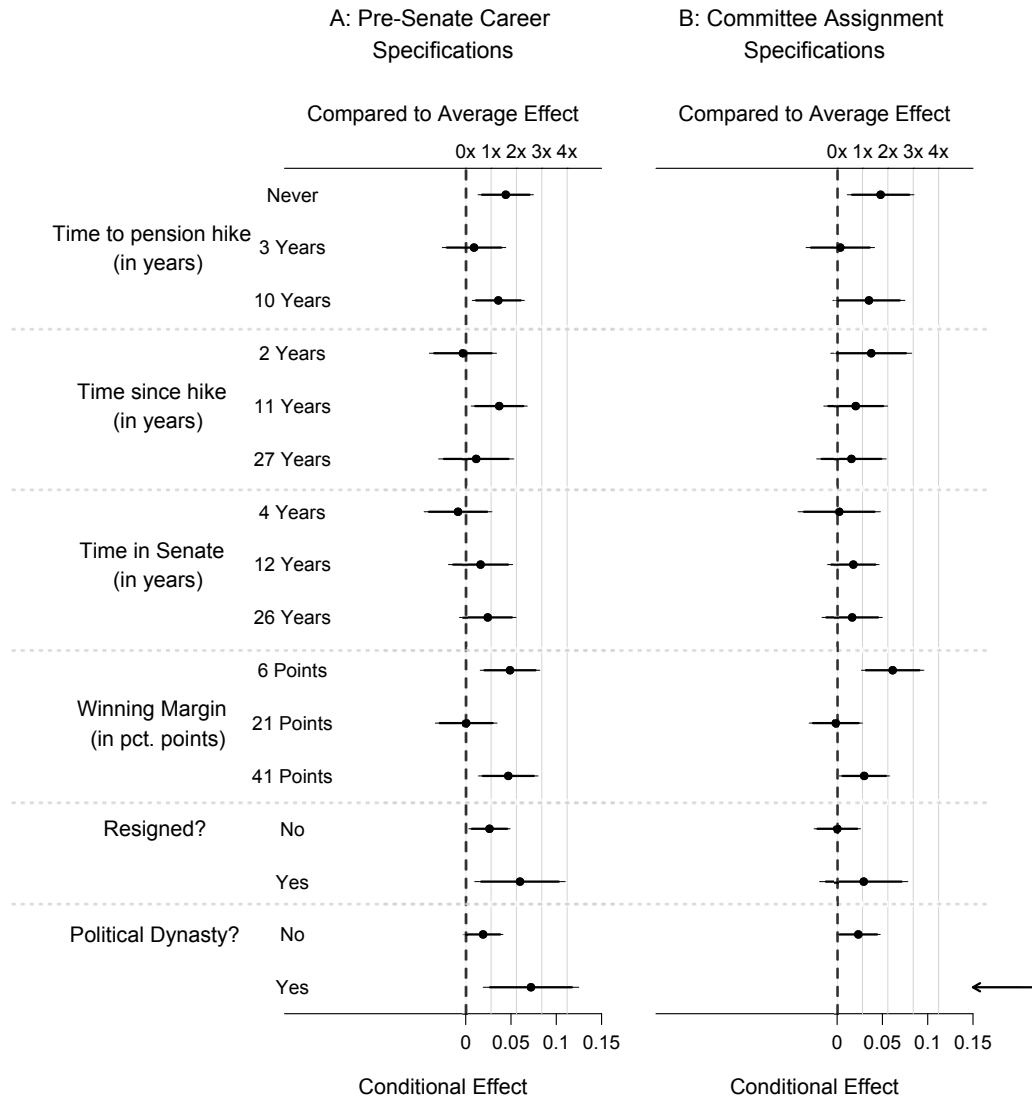
average effect.

As a check on these results, the second specification splits the data based on the time since the last pension scheme improvement. For the specification using pre-Senate careers to form reference groups there is no effect of Contract Size for senators, who have just experienced an increase in the lucrativeness of their pension, while the impact of Contract Size is more than twice as large as the average effect for senators, who have served eleven years since their last improvement. The effect disappears again for senators, who have served for a very long time. The differences in effects between the first and second bin has a p-value just over 0.056. The evidence using committee assignments to construct reference groups is not as strong in this case – there are no statistically significant local marginal effects.

Older and longer serving senators may have a stronger propensity to select out and might also be more attracted by private sector gains. The longest serving senators are also the ones, who will never see another improvement in their pension scheme. Because of problems with strong collinearity, I am not able to include age or seniority as controls using the binning estimator. Instead, to further probe this, in the third specification, I show the marginal effect of Contract Size for three different levels of tenure length. The results does not suggest that the findings about improvements in the pension scheme can be explained by length of tenure.

Uncertainty about a senator's political future is likely to exacerbate opportunity costs to holding office. In the fourth specification, I use the margin with which the senator won her seat in the previous election. This proxies how certain the senator can be that she will hold on to her seat in the next election. If it is unlikely that she will be reelected and can continue her political career, gains from holding office go towards zero, and the prospect of lucrative employment in the private sector should be more alluring. The results show that for senators, who were elected with a margin below six pct. points, the impact of Contract Size is twice the average effect. These results hold no matter, which reference groups is used to calculate Contract Size, and the p-values for the differences in effects between the first and second bin is .03 and .006 in the two specifications, respectively.

Next, I assess two alternative ways of proxying opportunity costs. First, since senators, who choose to resign, are in the best possible position to plan their future career trajectories, they are most likely to assess the opportunity costs to remaining in office. Senators, who leave Congress, because they lose an election, on the other hand, are in no such position. This would lead us to expect a larger effect for resigning senators. The Figure shows the effect of Contract Size for the subset of senators, who, respectively, did and did not resign of their own volition. The point estimate for senators, who chose to resign, is largest. In the specification using committee assignments, however, it is noisy,



**Figure 5: Effects for senators with differing opportunity costs.**

*Note: The figure shows that effects are concentrated among senators who will a) never see another improvement of their pension scheme, b) will not see one for several years, and c) have not seen one for some time. Senators who are about to receive an improvement are unaffected. The results are not driven by length of tenure. Additionally, senators, who won their previous election narrowly, are most strongly affected. Panels A and B show, respectively, the results from calculating Contract Size based on pre-Senate Careers and in-Senate committee assignment. In the first four specifications in each panel, the local marginal effects are estimated within each tertile of the variables using the Hainmueller et al. (2016) binning estimator. In the final two, effects are estimated at each level of the binary variables using linear interaction models. Two-way fixed effects are included in all models. Robust confidence intervals are 95 pct. (thin lines) and 90 pct. (thick lines), respectively. Top axis and corresponding grid lines show the average effect (columns 3 and 6 in Table 2) for comparison. Bottom axis shows the local marginal effect of Contract Size. Local marginal effect among dynastic senators only indicated by and arrow for presentational purposes.*

and statistically insignificant.

Second, we could expect members of political dynasties to be highly connected (Dal Bó et al. 2009). Since these connections are likely to be highly valuable in the private sector, this should increase the payoff to taking revolving door jobs, amplifying the effect of career prospects in general. The results suggest that, while the effect of career prospect exists for both groups of senators it is extremely large for dynastic senators but close to average for non-dynastic ones.

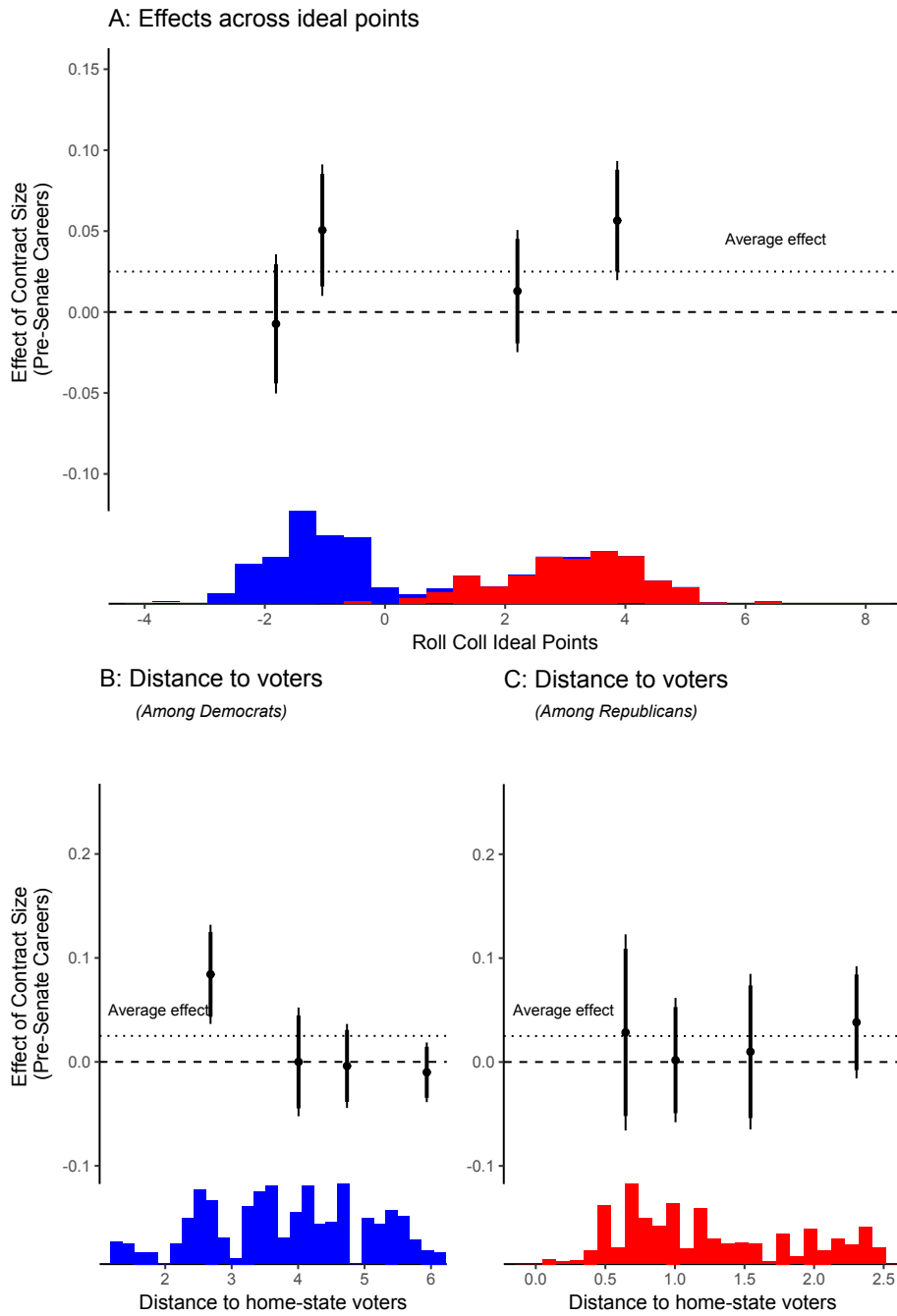
Overall, this indicates that senators discount gains from staying in office against potential private sector earnings. The senators with high opportunity costs react more strongly to private sector career prospects. Overall, these results provide further evidence that senators are motivated by private sector career prospects – and, hence, opportunity costs associated with remaining in office.

## **Further implications: are 'good' types attracted by the private sector?**

While it is generally accepted that motivating 'good' politicians to seek office is extremely important for a well-functioning legislature (see e.g. Besley (2006), Caselli and Morelli (2004), and Przeworski et al. (1999)), motivating them to stay in public service has generally received less attention. If there are heterogeneous effects of private sector career prospects across the ideological spectrum, the revolving door could be a factor – for better or worse – in getting specific types of politicians to leave public service. I now give a descriptive characterization of the ideological 'type' of senator, who selects out of Congress due to career prospects in the private sector. I examine two salient dimensions of ideological representation in American politics: polarization and representation of voters. Again, I use the Hainmueller et al. (2016) binning estimator to estimate the effects. The results are presented in Figure 6.

First, American party politics is highly polarized (see e.g. Hare and Poole (2014), Layman et al. (2006), Persily (2015), and Poole and Rosenthal (1984)), and recent research strongly suggests that the selection of extreme candidates – especially among Republicans – plays an important role in this process (Broockman et al. 2017; Thomsen 2014, 2017). If there are varying effects of career prospects across the ideological spectrum, the lure of the revolving door could either dampen or exacerbate polarization in Congress, depending on whether it makes extreme or moderate MCs select out.

Panel A shows how the effect varies across the range of roll call ideal points. For each senator, I have averaged the ideal point to better get at her type more generally. Interestingly, the effect is concentrated among the *moderates* in the Democratic Party



**Figure 6: Heterogeneous Effects of Career Prospects.**

*Note: The figure shows that moderate Democrats and partisan Republicans are affected most. For Democrats, senators closest to their home-state voters are affected the most. Effects do not vary for Republicans based on distances to voters. Local marginal effects are estimated using the Hainmueller et al. (2016) binning estimator. Two-way fixed effects are included in all models. Robust confidence intervals are 95 pct. (thin lines) and 90 pct. (thick lines), respectively. Dotted line show the average effect for comparison. Dashed line shows the sharp null. Histograms show the marginal distributions of the moderating variables. Red and blue histograms are, respectively, distributions of Republican and Democratic senators. These results are from specifications using pre-Senate careers to estimate Contract Size – results using committee assignments are similar and can be found in appendix E3 of the SI.*

and the *partisan* Republicans. This suggests a reverse dynamic to asymmetric polarization (Grossmann and Hopkins 2016), where – depending on who replaces the revolving door politicians – gains in the private sector may moderate Republicans, but polarize Democrats in the Senate, because of selection out of Congress.

One way of defining 'bad' types of politicians is as those, who fail to converge to the preferences of their constituencies (Besley 2006; Fearon 1999; Ferejohn 1986). Depending on which types of senator that is most attracted by career prospects, the revolving door could both improve and worsen representation. I investigate this possibility by allowing effects to vary depending on the average distance between a senator's ideal point and the preferences of her home-state voters, measured using the Caughey and Warshaw (2015a)<sup>7</sup> estimates of latent public opinion in the states. To get senator ideal points and public opinion estimates on the same scale, I re-estimate roll call ideal points using preferences of home-state voters as an informative prior.<sup>8</sup> The results (presented in Panels B and C) show that among Democrats, the senators, who represented their voters best, the effect is by far the largest, but virtually non-existent among the remaining Democrats. The average probability of selecting out for the 142 observations among the Democrats in the bottom quantile is approximately 9 pct. Hence, an increase of Contract Size amounting to one standard deviation would lead to between two and three of the Democrats, who were highly representative of their constituency, selecting out, instead of between one and two. For Republicans, however, there are no striking differences between those, who represented their voters well, and those that did not.

Seeing as an abundance of other factors might confound the effects of the moderators, the patterns presented here probably are not causal. But even though, for instance, extreme Republicans may be most strongly affected for other reasons than their partisanship, the interactions help in providing a descriptive characterization of the type of politician, whose career decisions are most affected by private sector gains. Taken with this caveat, and if we define 'good' types in terms of being moderate and representing voters well, the results indicate that the revolving door has disproportionately affected 'good' types among the Democrats, and 'bad' types among the Republicans. As I have noted previously, the overall turnover in the Senate is relatively low, and the chamber as such is unlikely to have become more or less responsive, because of the revolving door. However, replacing one bad Member with a good one – and vice versa – is likely to have a policy impact on the margin, especially in situations where one party narrowly holds

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<sup>7</sup>I get the estimates from the Caughey and Warshaw (2017) data set, as the available time period is longest.

<sup>8</sup>A concern could be that using this prior drives any potential effects by instilling an artificially strong relation between roll call votes and home-state public opinion. Since the correlation between home-state public opinion and roll call ideal points is actually slightly lower, when using the public opinion prior compared to the random walk prior ( $r = .36$  and  $.37$ , respectively), this does not seem to be the case.

the majority, and few senators are more likely to be pivotal.

## Conclusion

In this paper, I have documented that when private sector career prospects improve, the probability that senators walk through the revolving door increases. To measure this, I grouped senators, who served between 102nd and the 113th Congress, together based on their pre-Senate careers and the committees they served in. I then computed the expected size of the lobbying contracts for each of these career groups. A desirable by-product of this measurement strategy was that it provided a proxy for career prospects, which was unrelated to the individual characteristics of the senators in my sample.

The results indicated that when the expected Contract Size increased by one standard deviation, the probability that the average senator left Congress for a lobbying job rose by between 2 and 3 pct. points, depending on the specification. This effect compares to half of the baseline probability and one-third of the effect of ending a term in Senate. Importantly, senators, who left the work force after leaving Congress, were unaffected.

I provided suggestive evidence that it is opportunity costs associated with holding elected office, that drives the effect. Specifically, there was no effect of career prospects immediately before and after senators experience improved pension schemes. Instead the effect was localized among senators, who would never see another improvement, or who had to run for reelection before one. Similarly, senators, who only narrowly won their seat in the previous election were affected at an above-average rate.

This shows that monetary gains do not only structure the selection into public service – as documented in the extant literature. Their effect persists even after entering elective office, shaping the timing of resignation. The results suggest that while legislators probably are intrinsically motivated to serve their constituents and deliver good policies, they respond to material incentives as well. Senators – despite generally being comparatively wealthy – take stock of the opportunity costs associated with being in politics by gauging the career prospects available to them outside of public service. When the income, they relinquish by holding elected office, becomes large enough, the average senator will leave public service to take private sector employment.

I presented evidence suggesting that this selection out of public service differs across types of politicians. Specifically, moderate Democrats, who represented their voters well, and partisan Republicans are most affected. This suggests that the revolving door can moderate Republicans, but polarize Democrats and make them less representative of their voters. The Senate's revolving door might not swing fast enough to alter the chamber's ideological composition significantly. Even so, if the private sector attracts an additional

'good' or 'bad' Member, it holds the potential to change policy outcomes at the margin.

The literature on selection into elected office has predominantly focused on how incentives can be designed that make good types of politicians choose public service. My results suggests that equal attention should be paid to making sure they stay in office, after they are elected. One way of stemming the flow of politicians through the revolving door would be to make it more lucrative to hold public office. This could plausibly be done by increasing the salaries of politicians, but my results suggest that allowing the pension schemes for Members of Congress to improve in more increments than the current three, could provide a less expensive way of decreasing the lure of the private sector. Additionally, it warrants attention that private sector career prospects also weeds bad types out from public service. It might not always be desirable to slow the swing of the revolving door.

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