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Cardinals or Clerics? Congressional Committees and the Distribution of Pork

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Journalistic and academic accounts of Congress suggest that important committee positions allow members to procure more federal funds for their constituents, but existing evidence on this topic is limited in scope and has failed to distinguish the effects of committee membership from selection onto committees. We bring together decades of data on federal outlays and congressional committee and subcommittee assignments to provide a comprehensive analysis of committee positions and distributive politics across all policy domains. Using a within-member research design, we find that seats on key committees produce little additional spending. The chairs of the Appropriations subcommittees—the so called "cardinals" of Congress—are an exception to the rule. These leadership positions do generate more funding for constituents, but only from programs under the jurisdiction of their subcommittee. Our results paint a new picture of distributive politics and call for a reexamination of its canonical theories.

Beginning with Woodrow Wilson's landmark *Congressional Government* in 1885, congressional committees have long occupied a central place in the study of American politics. And no committee has received more scholarly attention than Appropriations, whose members largely determine how, when, and where the federal government spends money. The committee's power over federal spending is considered so great that the chairs of its 12 subcommittees have earned the moniker of "cardinals." According to both popular lore and canonical theories of distributive politics, a seat on Appropriations—not to mention ascension to status of cardinal—is coveted because it delivers federal projects and grants to the member's constituents. Yet, while the committee's pork-barreling prowess is often assumed, there is vanishingly little empirical evidence on the pork-based returns to a seat on Appropriations or any other committee.

To be sure, recent accounts have pointed out huge differences in the value of earmarks procured by members of the House and Senate Appropriations Committees relative to other members of Congress not serving on these committees (e.g., Allen 2007; Binder 2008; Lazarus 2009, 2010). But the comparison between members and non-members of Appropriations—a comparison that, in one way or another, underlies virtually the entire existing literature on this topic—may be misleading, and Figure 1 shows why. It presents the average annual value of earmarks procured by three groups of senators in the 110th and 111th Congresses. Those who served on the Appropriations Committee in both periods are shown in green; those who never served on Appropriations are shown in red; and those who joined Appropriations between the 110th and 111th Congresses are shown in blue. Consistent with previous accounts, when we look within either Congress, we see a huge difference between appropriators and non-appropriators. On average, members on the Appropriations Committee brought home significantly more earmarks than those not on the committee. However, we should not interpret this difference as the effect of serving on the committee. The committee members may represent high-need constituencies, or the members who otherwise procure many earmarks may be more likely to join Appropriations. In other words, Appropriations members might have procured the same earmarks even if they were not on the committee, and the non-committee

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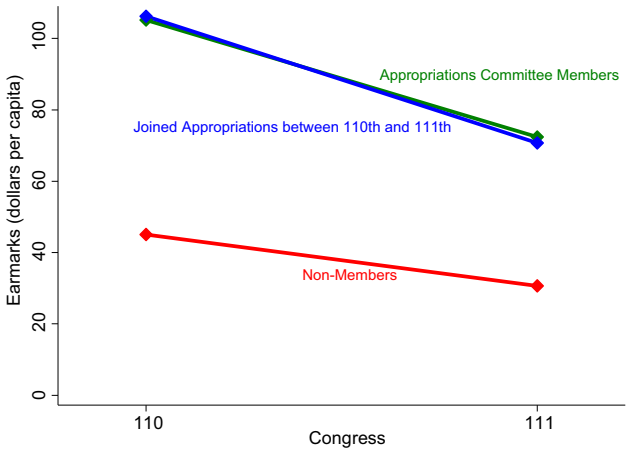
FIGURE 1 Appropriations and Earmarks, 110th and 111th Congresses



Note: The figure presents the average annual value of earmarks (dollars per capita) across three groups of senators for the 110th and 111th Congresses: those on the Appropriations Committee in both periods (green), those off the committee in both periods (red), and those that joined the committee between the 110th and 111th Congress (blue). On average, members of the Appropriations Committee brought home significantly more earmarks than those not on the committee. However, those who would later join the committee also brought home significantly more earmarks before they joined the committee, suggesting that much of the difference between committee members and non-members is driven, not by the effect of the committee seat, but rather by the success of earmarking members to gain a seat on the committee.

members might not have procured more earmarks even if they had been on the committee.

Those members who did not serve on Appropriations in the 110th Congress but joined the committee for the 111th Congress help us to gain leverage on this difficult counterfactual question and demonstrate the pitfalls of interpreting the cross-sectional differences. Even before they joined the Appropriations Committee, they were procuring significantly more earmarks than other members. These patterns suggest that much of the difference between committee members and non-members is driven not by the effect of committee membership on earmarks, but rather by the propensity of earmarking members to join the committee. Comparing the trends in earmarks for those who joined Appropriations and for those whose positions did not change, there appears to be no effect of joining Appropriations. While strong inferences cannot be drawn from this data, which spans only a brief period of time and for which only 5 senators changed committee positions, these kinds of differences-in-differences comparisons form the basis for our empirical strategy that we apply to more comprehensive data on federal spending.

In this article, we present a new test of committee influence over pork-barrel politics. We use a research design that isolates changes in federal spending that flow to a state or district as a result of the changing committee assignments of individual representatives over time, accounting for differences in the needs and demands of constituents along with differences in the abilities and preferences of individual legislators. While our main interest is in the House and Senate Appropriations Committees, we provide a comprehensive investigation that also includes authorizing committees and separately analyzes the various Appropriations subcommittees. Throughout, we distinguish the benefits, if any, accruing to majority and minority party members, and we compare rank-and-file members with cardinals and ranking minority members. Our analysis is enabled by a new data set we constructed that matches nearly every federal program to the Appropriations subcommittee with jurisdiction over it, allowing us to examine, for the first time, each subcommittee's influence over the programs directly under its control.

In general, we find that committee positions are not nearly as important for pork barreling as previously thought. Membership on important committees such as Appropriations produces no detectable increase in federal funding for a legislator's constituents. Even when we focus on the specific programs under their immediate jurisdiction, we find little effect of membership on authorizing committees or Appropriations subcommittees for federal funding. However, we do find strong evidence that the chairs of Appropriations subcommittees—the "cardinals" of Congress—along with the ranking minority members, receive significantly more money from their subcommittee's programs because of their institutional positions. Therefore, membership on the Appropriations Committee only produces more pork insofar as members are able to achieve a leadership position on a subcommittee—something that half of House Appropriations members do achieve at some point in their career. The effects of these leadership positions are restricted to the policy domains of the subcommittees, further circumscribing the importance of committees for pork. As we discuss in more detail at the end of the article, our results are at least partly inconsistent with virtually all previous theories of congressional committees and distributive politics, opening the door for new theories that can explain why rank-and-file members of Congress would cede significant power to a small number of senior members from both parties.

Related Literature

The modern literature on distributive politics grew out of the study of Congress and its committees.[1] Early works by Fenno (1966) and Wildavsky (1964) portrayed the various authorizing committees as advocates for spending on their preferred programs, while the House Appropriations Committee was cast as "the guardian of the purse," whose members regularly fought overspending by paring down agency budget requests and weeding out wasteful or particularistic projects. According to one view (e.g., Schick 1980, 1981), the Budget Act of 1974, which effectively fixed the size of the budget ex ante, removed the need for Appropriations to guard the purse and enhanced incentives for its members use their positions to engage in pork barreling (see Stewart 1989, p. 225).

Ferejohn (1974) studied rivers and harbors legislation to produce one of the first detailed studies of pork barreling, emphasizing the role of the authorizing committee and related appropriations subcommittees and giving special attention to the privileged chairmen. Around the same time, Mayhew (1974) studied the workings of particular committees and the efforts of members of Congress to attain positions that enable them to deliver and claim credit for benefits to their constituents. Many of these insights were codified in the early formal theory literature on distributive politics in which committees are the central organizing institutions (Shepsle 1978; Shepsle and Weingast 1981, 1987; Weingast and Marshall 1988; Weingast, Shepsle, and Johnsen 1981). The core ideas from this literature are succinctly captured by Weingast and Marshall (1988, p. 162): "First, committees are composed of 'high demanders,' that is, individuals with greater than average interest in the committee's policy jurisdiction. Second, the committee assignment mechanism operates as a bidding mechanism that assigns individuals to those committees they value most highly. Third, committee members gain a disproportionate share of the benefits from their policy area."

The distributive model has not gone unchallenged. The informational model of Krehbiel (1991) offers an alternative rationale for committees, portraying them as instruments for the division of labor and development of expertise, rather than logrolling. In this view, committee members are representative of the chamber rather than high demanders, diminishing expectations of "gains from trade" in the form of pork projects. The partisan model (Cox and McCubbins 1993; Kiewiet and McCubbins 1991) emphasizes the role of the majority party in controlling the organization of the chamber and setting its agenda. According to this theory, general-interest committees—such as Appropriations—should be representative of the majority party and promulgate policies that benefit the party, again downplaying the expectation that individual members will use their committee seats to pursue narrow constituency interests. Both the informational and the partisan models emphasize the majoritarian constraints facing committees—the requirement that all proposals from the committee be approved by a majority on the floor—which limits the ability of committee members to pursue their own particular interests, whether through pork barreling or other particularistic legislation.

In sum, the literature offers several competing views on the composition of committees and their relationship to parties and the rest of the chamber. The distributive view offers wide latitude for members of influential committees to use their positions to pursue pork-barrel politics and other forms of constituency service. Alternatively, the informational and partisan theories posit less scope for distributive politics. Under these theories, committee members might receive some benefits to compensate them for the services that they provide to the chamber or to their party. However, if they extract too much to the detriment of the chamber or their party, they will presumably lose power. In other words, there are theoretical reasons to expect committee positions to have large or small effects on the pork flowing to a legislator's constituents. Furthermore, to the extent that there are pork-related benefits of committee positions, the literature offers competing expectations about whether these effects are concentrated among committee leaders or shared among all committee members.

Several generations of empirical scholars have attempted to sort out the evidence for these competing views. In particular, a great deal of empirical work has been devoted to testing the first and third propositions in the above passage from Weingast and Marshall. Indeed, the question of whether committees are composed of high demanders has become a touchstone in the contest between the informational and distributive schools. The theory literature is ambiguous as to whether "high demand" arises from the constituency, the member, or both, and empirical analyses have explored committee-chamber differences in both members' attributes and those of their constituents. Analyses of roll-call records and interest-group ratings of members have generally found few if any committees dominated by preference outliers (e.g., Cox and McCubbins 1993; Krehbiel 1990), although results appear sensitive to which roll-call votes are analyzed (Hall and Grofman 1990). On the other

[1] This literature is vast and our review is necessarily selective. For a more thorough discussion, see Evans (2011).

hand, analyses of underlying constituency characteristics, measured by district-level demographics, reveal more evidence of high-demanding committees (Adler and Lapinsky 1997; Hurwitz, Moiles, and Rohde 2001; Sprague 2008) and subcommittees (Adler 2000).

The underlying motivation for high demanders to select onto particular committees, of course, is the belief that those committees provide access to distributive benefits—a.k.a. pork—for one's district, sometimes referred to as the "committee benefits hypothesis" (Evans 2011). However, the empirical literature on whether committees are composed of high demanders does not speak to the question of whether these members get more as a result of being on the committee. Evans (1994) and Lee (2003) find that members of the House Public Works Committee garner more highway demonstration projects than non-members. In an analysis of Senate appropriations bills, Evans (2004) finds that subcommittee members account for a disproportionate share of earmarks. Balla et al. (2002) find that members of the Senate (but not House) Appropriations Committee deliver more academic earmarks than do non-members. A spate of recent articles using the same data from Figure 1 on earmark sponsorship in the 110th and 111th congresses find that members of the House and Senate Appropriations Committees receive more earmarks than non-members (Clemens, Crespin, and Finocchiaro 2010; Lazarus 2009, 2010; Lazarus and Steigerwalt 2009). Earmarking advantages have also been found for some but not all Senate Appropriations subcommittees (Crespin and Finocchiaro 2008) and for some authorizing committees in the House (Lazarus 2010).

The aforementioned studies of committee advantages ask whether members of Congress who are on a committee at a given point in time receive more of the committee's benefits—whether earmarks or other project funding—than do members of the same chamber who are not on the committee at the same point in time. Such comparisons reveal interesting descriptive facts about committees, but cannot address the question at hand: Does a seat on the committee give a member additional distributive benefits compared to the counterfactual world in which the same member were not on the committee? The reasons the prior studies cannot assess the effect of committee membership are evident from Figure 1 and our preceding discussion. Moreover, the hypothesis that high demanders sort onto relevant committees provides a ready counter-explanation for any observed differences in outlays received by committee members and non-members. For example, the typical member of the House Committee on Agriculture represents a district in which 3.9% of the district is employed in the agriculture sector (compared to a baseline of 1.4% for those not on the committee).[2] Therefore, if we observe that members of the Agriculture Committee procure more agriculture funding for their districts, we have no way of attributing this difference to the effects of being on the committee or the differential needs and characteristics of the districts.

Some studies partially address these concerns by isolating within-electorate variation in committee membership, although these studies are limited in scope. Knight (2005) analyzes within-district variation in transportation project funding and within-district variation in membership on the House Committee on Transportation and Infrastructure. He finds that districts receive more funding during years in which their representative is on the committee, although his analysis is based on only two years of data and is complicated by an intervening congressional redistricting. Payne (2003), employing a regression with university-specific fixed effects, shows that a university receives more federal research funding when a Senator from its state is on the Appropriations Committee. Cohen, Coval, and Malloy (2011) use within-state variation to demonstrate that a state receives more earmarks and outlays when one of its representatives is the chair of one of the 10 "most influential" committees in his or her respective chamber. Conversely, Berry, Burden, and Howell (2010) find little evidence for committee effects in a within-district design, although committees were not the primary focus of the study. These studies make important contributions in controlling for unobservable heterogeneity across states, districts, or recipients.

To the extent that selection onto committees is driven by "high demand" generated by constituents, studies such as Payne (2003); Knight (2005); Cohen, Coval, and Malloy (2011); and Berry, Burden, and Howell (2010) effectively deal with these (time-constant) unobserved differences by including the relevant constituency-level fixed effects. However, to the extent that high demand arises from politician-level heterogeneity—that is, some politicians engage in pork barreling more than others (or are better at it) independent of the district they represent—then a constituency fixed effects model would not distinguish the effect of membership on the committee from the effect of having a high-demand representative. For example, suppose agricultural districts have a high demand for federal agriculture subsidies. Suppose also that, among the various representatives serving the same agricultural district over time, some had a greater proclivity or talent

[2]These figures were calculated using data from the U.S. Census for House districts in the 108th–111th Congresses. We find similar patterns for other committees as well.

for pork barreling than others and these high-demand representatives are more likely to seek a seat on an important committee. A regression with district fixed effects would control for the demand for subsidies due to being an agricultural district, but would not account for variation across the district's representatives in their taste for pork barreling and propensity to sit on Appropriations. Finding a significant coefficient for Appropriations in a district fixed effects model could imply that a seat on Appropriations generates more subsidies, or it could imply that pork-barreling members both deliver more subsidies and sit on Appropriations. Disentangling the effect of having a high-demand representative from the effect of committee assignments would require member-specific fixed effects, as we explain more fully in the following section.

While we are not aware of any previous work that has used within-member variation to identify the effect of committee membership on distributive outlays, several recent studies use within-member variation to answer related questions. Grimmer and Powell (2013a, 2013b) use a within-member design to analyze the effect of committee assignments on electoral success and campaign contributions. Alexander, Berry, and Howell (2014) use member fixed effects to estimate the relationship between legislator ideology and district outlays. Relatedly, Broockman and Butler (2014) exploit a randomized lottery to estimate the effects of more desirable committee positions for individual state legislators in Arkansas. However, none of these studies speak to the relationship between committee assignments and distributive outlays.

Research Design

The intuition behind our research design is illustrated in Figure 1. Instead of simply comparing committee members to non-members, we employ differences-in-differences designs. Specifically, we compare changes in pork for individual legislators over time as they switch their committee positions to changes in pork for legislators who do not switch committee positions. This design is implemented with an OLS regression of the following form:

$$Pork_{it} = \beta * CommiteePosition_{it} + \gamma_i + \delta_t + \varepsilon_{it}, \quad (1)$$

where γ_i represents legislator fixed effects,[3] which account for the fact that legislators represent different constituencies and some legislators are better than others in procuring pork, and δ_t represents year fixed effects, accounting for variation over time in the levels of pork. $CommitteePosition_{it}$ is a binary variable indicating whether a legislator holds a particular committee position in that particular year.

Assuming that different legislators follow parallel trends over time, on average, in the absence of any changes in committee positions, β represents the average effect of the committee position on outlays going to a legislator's constituents for those legislators that go on or off the committee.[4] In other words, we assume that those legislators who join or leave a committee would have followed the same trend, on average, as those who do not change committee positions if they had not joined or left. Violations of this parallel trends assumption would arise if legislators joined or left committees as they otherwise expected to receive more or less pork. For example, if legislators systematically join Appropriations as their constituents demand more pork, then we might overestimate the effect of a seat on Appropriations. Most changes in committee membership arise for reasons outside the control of the legislators—e.g., changes in majority party status, vacancies arising from retirements or transfers of other members—so this assumption is defensible on substantive grounds. Moreover, all subsequent analyses include controls for majority party status and seniority,[5] two factors that often coincide with changes in committee membership, and our results are virtually identical with or without these controls.

Each observation in our analysis is a legislator-year, and we separately analyze the House and Senate. Bicameralism and the fact that there are two senators from each state could complicate our analysis and interpretation in

[3] When studying the House of Representatives, we reset the legislator fixed effects following a congressional redistricting to ensure that we only compare cases in which a specific legislator is representing the same district over time. In other words, we use district-by-member fixed effects, accounting for all factors that are constant for constituents (demographics, preferences, district needs and demands, etc.) and for legislators (ability, prioritization of pork over other legislative activities, etc.). We also drop all observations for which district boundaries changed between congressional decisions and outlays.

[4] Our estimates are local to those who switch committee positions at some point. However, most members of Congress change committee positions, so our subsequent results are somewhat generalizable to all committee members. For example, 72% of House Appropriations members and 93% of Senate Appropriations members were off the committee at some point in their congressional careers. When examining Appropriations subcommittees, virtually every member was off the subcommittee at another point in his or her career. Specific figures for all committees and Appropriations subcommittees are showing in the Appendix.

[5] Technically, our research design already controls for seniority implicitly. By including legislator and year fixed effects, we account for the fact that an additional term of seniority might increase pork, because everyone who remains in the sample for a particular period gains the same amount of seniority. To account for the fact that seniority might influence pork in a non-linear way, we have run robustness checks, including dummy variables for different levels of seniority, and our results are unchanged with these specifications.

several ways. First, we always cluster our standard errors by state in order to account for the fact that each observation is not independent and could be influenced by other legislators representing the same constituents. Second, we might be interested to know whether the effects of committee membership vary depending on whether another legislator from the same constituency is also on the committee, and we find no evidence of such variation in the Appendix (Tables A4 and A5). Third, in the case of the Senate, we might worry that changes in committee membership coincide with changes in the committee positions of other Senators from the same state, leading to biased estimates. For example, if senators only join Appropriations as another senator from the same state leaves the committee, we could underestimate the effect of committee membership. Also in the Appendix, we discuss this issue in more detail and show its irrelevance for our results. When an individual senator joins or leaves a committee, the net change in the total number of senators from that state serving on the committee is very close to 1, and an instrumental variables approach that accounts for this issue produces results that are nearly identical to those from our simpler specification (Table A3).

Congressional Committees and Federal Outlays

While Figure 1 provides an illustrative example of the pitfalls of cross-sectional comparisons, we now turn to more systematic data on federal spending. We cannot draw strong inferences from data on earmarks, because it is only available for a three year period for which there were few changes in committee positions. For example, there are only 5 senators who joined Appropriations between the 110th and 111th Congresses, so any point estimates based on the data from Figure 1 would be imprecise.

Our data on federal spending come from the Federal Assistance Award Data System (FAADS), a government-wide compendium of federal programs. FAADS documents the transfer of almost anything from the federal government to a domestic beneficiary and includes virtually all federal programs other than procurement programs. Bickers and Stein (1991, 1997) assembled FAADS files from fiscal year 1984 to 1997; Berry, Burden, and Howell (2010) extended the data through 2007; and Alexander, Berry, and Howell (2014) extended the data through 2010, the last year FAADS existed. The complete database tracks the total dollar amount awarded by each federal program to recipients in each congressional district during each fiscal year. To reflect the fact that money spent this year is based on the budget passed during the prior year, outlays in year t are assigned to the legislator who represented the district in year $t-1$.[6] We exclude formula grants and entitlements from our analysis, as these categories are largely insulated from pork-barrel politics.[7]

With these data in hand, we first implement our differences-in-differences design to estimate the effects of congressional committee membership on all federal outlays. As before, each regression includes a binary variable indicating committee membership, year fixed effects, and legislator fixed effects. We also include controls for majority party status and seniority, although they have no impact on our subsequent estimates. We utilize the natural log of outlays as our dependent variable. We obtain the same results when using dollars per capita, but the logged approach produces more precise estimates by mitigating the influence of large outliers.[8] The logged approach also holds advantages for interpretation, because the coefficients can be approximately interpreted as proportionate changes (and percentage changes when the coefficient is multiplied by 100).[9]

Tables 1 and 2 present our estimates for every committee in the Senate and House of Representatives, respectively. Each row represents a separate regression, of which there are 47 across both tables. In each case, we fail to find a statistically significant effect of committee membership on pork.[10] There is also little rhyme or reason to the variation in our estimates across committees. Although always

[6]In the year following redistricting, such matches are not possible, and hence, we drop these cases.

[7]Using FAADS nomenclature, we exclude assistance types 3 and 10. In the Appendix, we analyze formula spending and detect no effect of committee positions on funds distributed by formula.

[8]We might also be interested in the effect of committee positions on the number of projects rather than the dollar amounts. Unfortunately, several practical limitations complicate the analysis of the number of projects. A lot of federal spending is reported in the aggregate at the county level, preventing us from observing the number of projects, and the standards by which spending is reported by project or in the county aggregate change over time and across place.

[9]From the definition of the natural log, the predicted proportianate change associated with joining a committee is $\exp(\hat{\beta})-1$, and the predicted proportianate change associated with leaving a committee is $\exp(-\hat{\beta})-1$. However, $\hat{\beta}$ and $-\hat{\beta}$ are close approximations to these numbers, respectively, for small values of $\hat{\beta}$. Even for large values of $\hat{\beta}$, the approximation is justified because it is bounded by the exact estimates—i.e., $-[\exp(-\hat{\beta})-1] \leq \hat{\beta} \leq [\exp(\hat{\beta})-1]\ \forall\ \hat{\beta}$ (Wooldridge 2013, p. 192).

[10]Under the null hypothesis of no effects, we would expect to find some statistically coefficients by chance. However, the fact that we find 0 out of 47 significant coefficients does not indicate a problem with our inferential strategy. Under the null, if all the tests were independent, we would expect to find 0 out of 47 significant coefficients 9% of the time ($.95\hat{}47 = .09$), and because these

TABLE 1 Senate Committees and Pork

	DV = Log Outlays (1984–2010)
Aging	−.011 (.021) [−.054, .031]
Agriculture	−.021 (.020) [−.061, .019]
Appropriations	.024 (.016) [−.008, .056]
Armed Services	−.035 (.019) [−.073, .003]
Banking	−.005 (.019) [−.043, .032]
Budget	.025 (.015) [−.006, .055]
Commerce	−.027 (.020) [−.066, .013]
Economic	−.002 (.022) [−.046, .041]
Energy	.020 (.015) [−.009, .049]
Environment	−.021 (.022) [−.065, .024]
Ethics	−.027 (.020) [−.067, .014]
Finance	−.011 (.016) [−.043, .022]
Foreign Affairs	.002 (.016) [−.030, .035]
Governmental Affairs	−.003 (.013) [−.028, .023]
Health	.040 (.059) [−.079, .160]
Indian Affairs	−.026 (.031) [−.088, .035]
Intelligence	−.018 (.016) [−.051, .014]
Judiciary	.028 (.014) [−.001, .057]
Labor	.000 (.011) [−.023, .022]
Library	.014 (.036) [−.057, .086]
Printing	.015 (.044) [−.073, .102]
Rules	.007 (.014) [−.021, .036]
Small Business	−.012 (.013) [−.039, .015]
Veterans' Affairs	.052 (.031) [−.010, .113]
Mean Dollars Per Capita	1247.5
St. Dev.	697.3

Note: State-clustered standard errors are in parentheses; 95% confidence intervals in brackets; $^{*}p < .05$, $^{**}p < .01$.
The table assesses the effect of membership on different Senate committees for federal outlays flowing to a legislator's state. Each row represents separate regression where logged outlays are regressed on a binary indicator for committee membership, year fixed effects, legislator fixed effects, and controls for majority party status and seniority. Each coefficient can be interpreted as the percent change in federal outlays flowing to a legislator's state associated with his or her joining or leaving a committee. For example, the estimate for the Appropriations Committee indicates that membership on Appropriations increases federal outlays to a legislator's state by 2.4%. None of the estimates are statistically significant, suggesting that there is little effect of Senate committee membership on pork.

TABLE 2 House Committees and Pork

	DV = Log Outlays (1984–2010)
Agriculture	.110 (.119) [−.129, .348]
Appropriations	−.010 (.018) [−.047, .027]
Armed Services	.002 (.020) [−.039, .043]
Banking	.010 (.037) [−.065, .085]
Budget	−.016 (.014) [−.043, .012]
DC	.033 (.090) [−.147, .214]
Education	.104 (.095) [−.087, .294]
Energy	.018 (.030) [−.042, .078]
Ethics	−.019 (.060) [−.139, .102]
Foreign Affairs	.020 (.041) [−.063, .104]
Government Operations	−.012 (.021) [−.053, .030]
Homeland Security	.060 (.037) [−.014, .134]
House Administration	−.024 (.028) [−.079, .032]
Judiciary	−.029 (.022) [−.074, .016]
Merchant Marine	−.046 (.051) [−.147, .056]
Natural Resources	−.005 (.020) [−.046, .036]
Post Office	−.043 (.045) [−.134, .048]
Public Works	.007 (.024) [−.040, .055]
Rules	−.039 (.031) [−.101, .023]
Science	.015 (.023) [−.031, .062]
Small Business	−.012 (.021) [−.054, .029]
Veterans' Affairs	−.026 (.035) [−.096, .045]
Ways and Means	−.095 (.116) [−.328, .139]
Mean Dollars Per Capita	1242.0
St. Dev.	1045.0

Note: State-clustered standard errors are in parentheses; $^{*}p < .05$, $^{**}p < .01$.
The table mirrors Table 1 for the House of Representatives. Each row represents separate regression where logged outlays are regressed on a binary indicator for committee membership, year fixed effects, legislator fixed effects, and controls for majority party status and seniority. Each coefficient can be interpreted as the percent change in federal outlays flowing to a legislator's district associated with his or her joining or leaving a committee. For example, the estimate for the Appropriations Committee indicates that membership on Appropriations decreases federal outlays to a legislator's district by 1.0%. None of the estimates are statistically significant, suggesting that there is little effect of House committee membership on pork.

insignificant, we obtain negative estimates for some supposedly important committees (e.g., Senate Agriculture, House Appropriations) and positive estimates for some supposedly unimportant committees (e.g., Senate Library and House DC). Moreover, in most cases, the null results cannot be attributed to imprecision. For example, for the House Appropriations Committee, we obtain a point estimate of −.010 and a standard error of .018. In other words, we estimate that membership on the House Appropriations Committee decreases the outlays going to a representative's district by 1%, and we can statistically reject any positive effect greater than 2.7%.[11] To assess the

tests are not independent, this outcome could be even more likely. Furthermore, an alternative inferential strategy where p-values are calculated by randomly permuting the committee variables produces nearly identical results.

[11]This quantity is simply the upper bound of the 95% confidence interval, shown in brackets alongside each estimate in Tables 1 and 2. For subsequent tables, we do not present the confidence

substantive significance of these figures, consider that the average member of the House procures approximately US $1,200 per person per year from these funds for his or her district. Our estimates place an upper bound on the effect of committee membership on pork of no more than, say, 10 to 20 US dollars per person per year—hardly a huge boon for the district.

Overall, we find little evidence that committee memberships influence the outlays flowing to a legislator's constituents. In the Appendix, we further estimate the effect of Senate committee positions for other measures of pork—procurements, federal civilian employment, and military employment, and we obtain similar null results. Even coveted seats on the House and Senate Appropriations Committees do not produce more federal funding. In the next section, we take a finer approach, separating outlays into different policy domains. This allows us to test more nuanced hypotheses about the effects of authorizing committee and Appropriations subcommittee membership for funding within the policy domains of the committees. Even if committee membership does not significantly influence outlays overall, perhaps it allows legislators to garner more funds in the policy areas where they have specific interests and institutional roles.

Authorizing Committees, Appropriations Subcommittees, and Outlays across Policy Areas

For the following analyses, we produce a novel data set that matches each federal program to its governing Appropriations subcommittee in both the House and Senate. To do so, we rely upon the subcommittee jurisdiction reports produced by each Appropriations Committee in every term. These reports list the agencies, departments, and bureaus whose programs are under the jurisdiction of each appropriations subcommittee. We then identify from FAADS all the programs controlled by the agencies under the jurisdiction of each subcommittee. With programs matched to agencies and agencies matched to subcommittees, we produce separate aggregations of outlays for each subcommittee. The end result is a data set of district-by-year-by-subcommittee outlays for the House and state-by-year-by-subcommittee outlays for the Senate.

With these data, we test specific hypotheses about the role of committee memberships for federal outlays in different policy areas. For each Appropriations subcommittee, we test whether membership on the subcommittee leads to more outlays *from the programs controlled by the subcommittee*. We also match each subcommittee to the most likely authorizing committee in its policy area. There is not a one-to-one relationship between authorizing committees and Appropriations subcommittees, but we connect each subcommittee with the most relevant authorizing committee based on their names. Most of these classifications are straightforward (e.g., the Agriculture Committees are connected to the Appropriations Subcommittees on Agriculture). Some Appropriations subcommittees—Financial Services, Foreign Operations, Legislative Branch, and Treasury—are excluded from our analysis because they oversee relatively little spending that can be matched to districts or states.

Authorizing committees and Appropriations subcommittees could theoretically direct outlays to their constituents in different ways. Borrowing an analogy from Munson (1993), authorizing committees prepare the grocery list, and Appropriations subcommittees do the shopping. Therefore, authorizing committees could direct money to their constituents by focusing on the types of spending that would most likely benefit their district (e.g., juice vs. milk on the grocery list), and Appropriations subcommittees can decide how much to spend and on which type of each item (e.g., which brand of juice and how much to buy). Both committees provide opportunities for legislators to direct money to their constituents, although the Appropriations subcommittees appear to provide much more flexibility and autonomy.

We test the effects of membership on authorizing committees and Appropriations subcommittees with our differences-in-differences design. We regress (logged) dollars in each policy area on a binary variable indicating committee or subcommittee membership, year fixed effects, legislator fixed effects, and controls for majority party and seniority. We also combine data from all policy areas to conduct a more precise test of the average effects of membership on authorizing committees and Appropriations subcommittees. In these pooled regressions, each legislator-year-subcommittee is a unique unit of observation, and the regressions include year-subcommittee and legislator-subcommittee fixed effects, allowing for different time trends and legislator-specific effects in each policy area.[12] Tables 3 and 4 present the results for the Senate and House, respectively.

intervals in order to conserve space, but this number can be easily approximated by hand by doubling the standard error and adding the point estimate.

[12] In running these pooled regressions, we do not assume that effects are constant across different committees and subcommittees. The

TABLE 3 Senate Committees and Pork across Policy Domains (DV = Log Outlays)

	Mean (SD) Dollars Per Capita	Authorizing Committee	Appropriations Subcommittee
Agriculture	106.1 (73.8)	.054 (.049)	−.001 (.044)
Commerce	18.3 (28.1)	−.049 (.053)	.117 (.051)*
Defense	8.9 (10.1)	.101 (.075)	.147 (.147)
Energy	8.3 (18.4)	.118 (.210)	−.018 (.088)
Homeland Security	35.1 (108.1)	−.049 (.239)	−.306 (.127)*
Housing	90.9 (58.6)	.024 (.035)	.008 (.027)
Interior	26.3 (71.9)	.047 (.055)	.154 (.076)*
Labor	836.6 (505.0)	−.014 (.014)	.029 (.017)
Military Construction	10.5 (12.7)	−.178 (.170)	−.006 (.100)
Transportation	92.4 (77.1)	.132 (.054)*	.017 (.046)
Pooled		**.044 (.044)**	**.043 (.024)**
Naive		.102 (.055)	.096 (.098)

Note: State-clustered standard errors are in parentheses; *p < .05, **p < .01.

The table assesses the effect of membership on authorizing committees and Appropriations subcommittees for federal outlays germane to different issue areas. Each row lists a Senate Appropriations subcommittee, the average amount of money flowing through each subcommittee, and the results of two regressions. Some subcommittees are excluded because they handle little domestic spending (e.g., Financial Services, Foreign Operations, and Treasury). For authorizing committees, we match each Appropriations subcommittee to the most relevant authorizing committee, and we test whether membership on that committee leads to more money in that issue area. For Appropriations subcommittees, we test whether membership on the subcommittee leads to more money in that issue area. In both cases, we regress the logged outlays in each policy domain going to each legislator's state on a binary indicator for committee or subcommittee membership, year fixed effects, legislator fixed effects, and controls for majority party status and seniority. The resulting coefficients can be interpreted as the percent change in outlays for a legislator's state in each issue area associated with his or her joining or leaving the relevant authorizing committee or Appropriations subcommittee. The individual estimates are imprecise and should not be interpreted too strongly. The pooled analyses combine data from all issue areas and relevant committees to test for the average effect of membership on an authorizing committee or Appropriations subcommittee on outlays germane to those committees. These pooled regressions include year-subcommittee fixed effects and legislator-subcommittee fixed effects. On average, we estimate that membership on authorizing committees leads to a 4.4% increase in outlays in that issue area, and membership on an Appropriations subcommittee leads to a 4.3% increase, but neither estimate is statistically significant.

Most of the estimates for individual committees and policy areas are imprecise and often in the unexpected direction. Across the House and Senate, we obtain 3 positive, statistically significant estimates and 2 negative, statistically significant estimates. The pooled estimates are substantively small and statistically insignificant. According to our point estimates, membership on an authorizing committee increases outlays in that policy area by 4.4% and 2.2% in the Senate and House, respectively. Membership on an Appropriations subcommittee increases outlays in that policy area by 4.3% and 1.6% in the Senate and House, respectively. Surprisingly, then, membership on the committees most important for determining spending in each policy area produces little additional pork even in that area.

Illustrating the importance of our within-member, differences-in-differences designs, Tables 3 and 4 also present the results of naive cross-sectional regressions that make comparisons between members on and off of these committees. These naive tests mimic the pooled analyses but exclude the legislator-subcommittee fixed effects, closely mirroring analyses from the previous literature. Sure enough, the cross-sectional comparisons significantly overestimate the effects of committees. If we had failed to carry out our within-member design, we would have concluded that these committees are crucial for spending. For example, members of authorizing committees in the House receive 26% more money in the policy domains related to their committees, although our differences-in-differences results suggest that these committee positions have virtually no effect on pork.

In analyzing federal outlays, we remove formula grants and entitlements, because members of Congress are unlikely to influence the flow of these funds to their constituents. Removing these forms of outlays improves our statistical precision by removing sources of variation in outlays that are likely outside the control of the member. However, authorizing committees play an important role in writing formulas, and formulas may be a mechanism by which authorizing committee members direct funds

pooled regressions simply provide the best estimate of the average effect across all policy domains.

TABLE 4 House Committees and Pork across Policy Domains (DV = Log Outlays)

	Mean (SD) Dollars Per Capita	Authorizing Committee	Appropriations Subcommittee
Agriculture	89.7 (311.0)	.176 (.137)	.305 (.201)
Commerce	15.8 (34.5)	.348 (.232)	−.135 (.209)
Defense	7.3 (16.3)	−.792 (.428)	.290 (.348)
Energy	7.9 (22.3)	.245 (.385)	−.600 (.427)
Homeland Security	8.3 (138.1)	−.178 (.670)	.273 (.465)
Housing	10.4 (32.9)	.080 (.069)	−.283 (.122)*
Interior	9.5 (39.7)	.261 (.278)	.071 (.214)
Labor	942.0 (684.5)	.060 (.083)	−.019 (.019)
Military Construction	2.6 (7.1)	−.023 (.023)	−.002 (.023)
Veterans' Affairs	81.1 (214.5)	−.214 (.258)	.172 (.331)
Transportation	57.5 (94.6)	.050 (.045)	.040 (.044)
Pooled		**.022 (.080)**	**.016 (.096)**
Naive		.258 (.086)**	.188 (.117)

Note: State-clustered standard errors are in parentheses; *p < .05, **p < .01.
The table mirrors Table 3 for the House of Representatives. Each row lists a House Appropriations subcommittee, the average amount of money flowing through each subcommittee, and the results of two regressions. Some subcommittees are excluded because they handle little domestic spending (e.g., Financial Services, Foreign Operations, and Treasury). For authorizing committees, we match each Appropriations subcommittee to the most relevant authorizing committee, and we test whether membership on that committee leads to more money in that issue area. For Appropriations subcommittees, we test whether membership on the subcommittee leads to more money in that issue area. In both cases, we regress the logged outlays in each policy domain going to each legislator's district on a binary indicator for committee or subcommittee membership, year fixed effects, legislator fixed effects, and controls for majority party status and seniority. The resulting coefficients can be interpreted as the percent change in outlays for a legislator's district in each issue area associated with his or her joining or leaving the relevant authorizing committee or Appropriations subcommittee. The individual estimates are imprecise and should not be interpreted too strongly. The pooled analyses combine data from all issue areas and relevant committees to test for the average effect of membership on an authorizing committee or Appropriations subcommittee on outlays germane to those committees. These pooled regressions include year-subcommittee fixed effects and legislator-subcommittee fixed effects. On average, we estimate that membership on authorizing committees leads to a 2.2% increase in outlays in that issue area, and membership on an Appropriations subcommittee leads to a 1.6% increase, and neither estimate is statistically significant.

to their constituents. To test this hypothesis, we replicate our analyses of authorizing committees using only formula grants as the outcome measure (results are shown in Tables A10 and A11 in the Appendix). As with other outlays, we find little evidence that authorizing committee positions influence the flow of formula grants to a member's constituents, even when focusing on formula grants within the domain of the committee.

To further explore our average null results, we test whether committee seniority plays a role in the procurement of outlays. Perhaps membership on the committee has little effect, on average, but there may be a large effect of serving on the committee for many years. To test this hypothesis, we code an additional variable indicating the number of years that a member has been on a committee and add it to the previous regressions. For both authorizing committees and Appropriations subcommittees, we still detect no effect of committee membership and the effect appears to be unrelated to the amount of time on the committee.

We also test whether the effects of these committee memberships vary over time. Perhaps the effects of committee membership were greater in the "classic era" of Congress and before the Republican takeover after the 1994 election. We split the data into three periods according to redistricting cycles, and conduct our differences-in-differences tests for each time period. Again, we find no effect of authorizing committees or Appropriations subcommittees in any era. Across many batteries of tests, we find virtually no evidence that committee positions influence federal spending. Membership on authorizing committees or Appropriations subcommittees does not influence the money flowing to a member's constituents—even within the policy domain of the committee.

Do the Cardinals Rule Their Respective Domains?

How can a position on an Appropriations subcommittee fail to produce additional pork from the very programs

under its jurisdiction? After all, subcommittees exercise significant autonomy in determining how money will be spent in their domains. One potential explanation is that the chairs of Appropriations subcommittees—the so called "cardinals" of Congress—dominate the allocation of federal spending while yielding little power to rank-and-file members of the subcommittee. Several accounts of the appropriations process (e.g., Munson 1993; Savage 1991) suggest a preeminent role for these leaders, and previous scholars have discussed the power of subcommittee chairs (Hall and Evans 1990) and the prestige and career benefits associated with these positions (Deering 1996).

Why might subcommittee chairs garner substantial gains while rank-and-file members receive little in an otherwise majority-rule committee? One reason is that the cardinals hold agenda-setting power on their subcommittees, and previous work demonstrates the importance of agenda setting for policy decisions, resource allocations, and committee decisions (Baron and Ferejohn 1989; Plott and Levine 1978; Romer and Rosenthal 1978). Qualitative accounts of the appropriations process are consistent with the notion that cardinals hold agenda-setting power. The chair of the Appropriations Committee often allocates money across the subcommittees with little input from the cardinals or rank-and-file committee members. Then, the cardinals often determine how money will be spent within the domain of their subcommittee with little input from the other members. If a rank-and-file subcommittee member wants to increase spending in a particular area, he or she must convince the chair to cut elsewhere. The diverse and conflicting interests on the subcommittee often lead to stalemate, with the cardinal's initial proposal standing more or less unaltered (Munson 1993).

Qualitative accounts also suggest an important role for the ranking minority member of an Appropriations subcommittee. According to Munson (1993), the chair and ranking minority member often strategize together and ally with one another in subcommittee meetings. Ranking minority members, while presumably less powerful than cardinals, may have particular influence over appropriations for several reasons. The cardinal may need the support of his minority members, and winning over the ranking minority member could be useful in achieving this end. Moreover, the ranking minority member could be the cardinal after the next election, so the current cardinal may want to build good will and trust. In many cases, these two leaders will have worked together for many years, may have switched places as chair and ranking minority member, and will have built a strong partnership.

Inspired by theories of agenda-setting power and by qualitative accounts of Appropriations subcommittees, we estimate the effects of subcommittee leadership status for federal outlays in each policy domain. Specifically, we assess the effects of 6 different levels of status on the Appropriations Committee: minority member of Appropriations but not the relevant subcommittee, majority member of Appropriations but not the relevant subcommittee, minority subcommittee member, majority subcommittee member, ranking minority member, and subcommittee chair. The excluded category, to which each is being compared, is the remaining members of the chamber without a seat on Appropriations. We implement the same differences-in-differences design as before, including these 6 indicator variables in addition to year fixed effects, legislator fixed effects, and controls for majority party status and seniority. As in Tables 3 and 4, the dependent variable is logged outlays germane to each subcommittee. As before, we additionally conduct pooled regressions, combining data from all subcommittees and including year-subcommittee and legislator-subcommittee fixed effects.

Results for the Senate and House are shown in Tables 5 and 6, respectively. Consistent with our previous results, we find little evidence that membership on Appropriations leads to more money and little evidence that membership on an Appropriations subcommittee leads to more money, even from its own programs. However, we find strong evidence that leadership positions on Appropriations subcommittees produce significant increases in federal outlays. In the Senate, a position as a ranking minority member produces a 20% increase in the funds flowing to a legislator's state from that subcommittee. In the cases of the Defense and Energy subcommittees, we detect much larger effects of 86% and 94%. A position as a Senate cardinal is even more effective, increasing outlays by 28%, on average, and doubling them in the cases of defense and energy. In the House, we detect even stronger effects of these leadership positions. Ranking minority positions increase outlays by 68%, on average, and subcommittee chair positions increase outlays by 96%. Cardinals in the House, on average, appear to procure approximately twice as much money from their subcommittee as they otherwise would if they were not the chair or ranking minority member.

The larger effects in the House compared to the Senate could be explained by several factors. Qualitative accounts suggest that the House Appropriations Committee wields more power than its counterpart in the Senate—a sore point in Senate–House relations (e.g., Fenno 1966). Appropriators in the Senate are spread thinly across multiple committees, while Appropriations is typically the only committee assignment for those in the House. This means that the cardinals in the House can dedicate more

TABLE 5 Senate Appropriations Committee Status and Germane Outlays (DV = Log Dollars)

	Minority Appropriations Member	Majority Appropriations Member	Minority Subcommittee Member	Majority Subcommittee Member	Ranking Minority Member	Subcommittee Chair
Agriculture	−.024 (.034)	−.003 (.029)	−.048 (.053)	−.001 (.047)	.094 (.058)	.265 (.168)
Commerce	.007 (.047)	.028 (.072)	.105 (.066)	.087 (.054)	.397 (.073)**	.537 (.091)**
Defense	.321 (.120)*	.088 (.140)	.337 (.153)*	.252 (.178)	.860 (.216)**	.936 (.268)**
Energy	.039 (.101)	.017 (.106)	−.021 (.105)	−.028 (.151)	.940 (.311)**	1.165 (.350)**
Homeland Security	.203 (.181)	.235 (.233)	−.396 (.181)*	−.008 (.176)	−.385 (1.308)	−.482 (1.310)
Housing	−.041 (.036)	−.046 (.035)	−.012 (.030)	−.007 (.035)	−.049 (.082)	−.003 (.083)
Interior	.025 (.088)	−.080 (.080)	.166 (.099)	.083 (.094)	.133 (.115)	.394 (.176)*
Labor	.048 (.020)*	.030 (.029)	.039 (.026)	.055 (.028)	−.019 (.055)	.025 (.029)
Military Construction	.346 (.127)**	.245 (.141)	.232 (.111)*	.113 (.151)	.133 (.168)	−.269 (.190)
Transportation	.026 (.055)	.030 (.052)	.074 (.062)	−.002 (.055)	.057 (.106)	.069 (.139)
Pooled	**.082 (.030)****	**.038 (.036)**	**.070 (.035)***	**.052 (.041)**	**.196 (.087)***	**.278 (.115)***

Note: State-clustered standard errors are in parentheses; *p < .05, **p < .01.
The table assesses the effects of membership and status on the Senate Appropriations Committee and the relevant Appropriations subcommittee for federal funding across different substantive areas. Each row presents the results of a separate regression, with 6 binary independent variables indicating committee status. For each subcommittee and substantive area, log outlays are regressed on the 6 committee variables, year fixed effects, legislator fixed effects, and controls for majority party status and seniority. From left to right, the table presents the effects of being a minority or majority member of the Appropriations Committee not on the relevant subcommittee, minority or majority member of the relevant Appropriations subcommittee, ranking minority member of the Appropriations subcommittee, or chair of the relevant Appropriations subcommittee. The pooled regression combines data from all subcommittees and includes year-subcommittee fixed effects and legislator-subcommittee fixed effects. We find that membership on the Appropriations Committee or the relevant Appropriations subcommittee leads to modest increases in federal outlays to a legislator's state, but obtaining a position as a ranking minority member or chair of an Appropriations subcommittee leads to significant increases in outlays. Ranking minority members garner 20% more money and subcommittee chairs garner 28% more money for their states within the domain of their subcommittee.

time, energy, and political capital to appropriations relative to those in the Senate. Lastly, as a practical matter, Senators represent larger constituencies than members of the House. States are, on average, almost 9 times as large as congressional districts, so doubling the outlays for a state likely requires more effort and power than doubling the outlays for a district. Considering this, a 28% effect for cardinals in the Senate is actually greater in total dollars than a 96% effect in the House.

Additional Results

Why do ranking minority members of Appropriations subcommittees appear to wield so much influence? We have already mentioned some potential explanations along with qualitative accounts of their informal power. In the Appendix, we provide an empirical test for one of our proposed mechanisms. Perhaps the cardinals give outlays to the ranking minority members, because they may become cardinals in the next Congress, and the current cardinals would like to stay in their good graces and maintain a cooperative relationship. If this is the primary explanation for the power of ranking minority members, we might expect to find greater effects of the ranking minority position when the majority party of the chamber is expected to change soon. Therefore, we code a binary variable, *turnover*, which indicates whether the majority party of the chamber will change in the next Congress, and we interact this variable with each of our variables indicating status on an Appropriations subcommittee. Table A12 presents our pooled regressions for the Senate and House with these interactions included. Although the results are statistically imprecise due to the few cases of electoral turnover, we find that the effect of a ranking minority position in the House is approximately twice as large when the majority party will change in the next congress, suggesting that expected electoral turnover may be one important explanation for the ranking minority effect.

Seeing these strong results for leaders of Appropriations subcommittees in the policy areas germane to the subcommittee, we wonder whether these leadership positions influence funding in other policy areas outside the subcommittee's immediate jurisdiction. One on hand, power in one area could spread into other areas. Perhaps cardinals negotiate with one another to get more funding in other areas of government as well. On the other hand, the time, resources, and political capital necessary

TABLE 6 House Appropriations Committee Status and Germane Outlays (DV = Log Dollars)

	Minority Appropriations Member	Majority Appropriations Member	Minority Subcommittee Member	Majority Subcommittee Member	Ranking Minority Member	Subcommittee Chair
Agriculture	.272 (.234)	.187 (.285)	.659 (.564)	.586 (.323)	.823 (.633)	1.070 (.999)
Commerce	−.325 (.268)	−.073 (.189)	.088 (.315)	.237 (.449)	.829 (.707)	.235 (.426)
Defense	.474 (.378)	.173 (.373)	−.581 (.955)	−.456 (1.234)	2.175 (1.599)	2.596 (1.207)*
Energy	−.817 (.523)	−.484 (.424)	−1.338 (.746)	−.047 (.539)	.014 (.866)	1.277 (1.197)
Homeland Security	.270 (.602)	.200 (.464)	1.627 (1.552)	.797 (.864)	−1.785 (1.653)	2.223 (1.610)
Housing	−.328 (.139)*	−.250 (.206)	.000 (.000)	−.087 (.321)	.000 (.000)	−.378 (.235)
Interior	.187 (.251)	−.068 (.261)	.173 (.415)	.421 (.336)	.528 (1.391)	−.265 (.718)
Labor	.001 (.025)	−.018 (.023)	−.064 (.028)*	−.042 (.024)	−.014 (.066)	.052 (.056)
Military Construction	−.026 (.026)	.012 (.033)	−.018 (.054)	.041 (.045)	−.039 (.059)	.112 (.110)
Transportation	.424 (.416)	.064 (.397)	−.402 (.390)	.930 (.562)	1.742 (3.181)	.032 (3.649)
Veterans' Affairs	−.036 (.053)	.074 (.057)	.190 (.087)*	.134 (.103)	.556 (.223)*	.229 (.170)
Pooled	**.019 (.105)**	**−.011 (.101)**	**−.029 (.190)**	**.207 (.145)**	**.677 (.288)***	**.958 (.353)****

Note: State-clustered standard errors are in parentheses; *p < .05, **p < .01.
The table mirrors Table 5 for the House of Representatives. Each row presents the results of a separate regression, with 6 binary independent variables indicating committee status. For each subcommittee and substantive area, log outlays are regressed on the 6 committee variables, year fixed effects, legislator fixed effects, and controls for majority party status and seniority. From left to right, the table presents the effects of being a minority or majority member of the Appropriations Committee not on the relevant subcommittee, minority or majority member of the relevant Appropriations subcommittee, ranking minority member of the Appropriations subcommittee, or chair of the relevant Appropriations subcommittee. The pooled regression combines data from all subcommittees and includes year-subcommittee fixed effects and legislator-subcommittee fixed effects. We find that membership on the Appropriations Committee or the relevant Appropriations subcommittee leads to modest increases in federal outlays to a legislator's district, but obtaining a position as a ranking minority member or chair of an Appropriations subcommittee leads to significant increases in outlays. Ranking minority members garner 68% more money and subcommittee chairs garner 96% more money for their districts within the domain of their subcommittee.

to achieve such large increases in funding within a subcommittee may detract from a legislator's ability to advocate for his or her constituents in other areas, meaning that the gains of cardinals in their policy domains may be canceled out by losses in other areas. Tables A6 and A7 in the Appendix mirror Tables 5 and 6, but the dependent variable is (logged) dollars from programs *outside* subcommittee's jurisdiction. The pooled estimates are precisely estimated and close to zero, suggesting that cardinal and ranking minority positions do not garner more money in other areas, and they also do not detract from other areas. Therefore, the influence of Appropriations subcommittee leaders appears to be limited specifically to the programs under their subcommittee's jurisdiction.

Seeing the importance of leadership positions on Appropriations subcommittees, we also wonder if leadership positions on other committees produce similar effects. In Tables A8 and A9 in the Appendix, we test whether leadership positions on authorizing committees produce more outlays within the substantive domain of the committee. When we pool evidence from all relevant authorizing committees in the Senate or House, we obtain positive point estimates for the ranking minority member and the chair, although none of these results are statistically significant. Furthermore, these estimates are significantly smaller than those obtained for the leaders of Appropriations subcommittees. Therefore, there may be some small positive benefit to leadership positions on authorizing committees, but they pale in comparison to the effects for cardinals.

Lastly, because the Democratic and Republicans parties express different preferences over spending, we test whether the effects of Appropriations subcommittee status vary across the party affiliation of members. In Table A13 of the Appendix, we replicate the pooled regressions from Tables 5 and 6, but include interactions for party. On one hand, we might expect greater effects for Democrats, because they appear to express greater preferences for pork-barrel spending. On the other hand, if rank-and-file Democrats not on Appropriations engage in more pork barreling than rank-and-file Republicans, we might expect greater effects for Republicans, because they have more room to gain when they join Appropriations or achieve an important position on a subcommittee. The results of this test are imprecise, so we cannot statistically reject the hypothesis that the effects are the same for both parties. Nonetheless, to the extent that we find differences, the point estimates suggest that

Republicans gain more from subcommittee positions than do Democrats.

Conclusion

Our analysis reveals far more concentration of power in the appropriations process than portrayed by canonical theories of distributive politics. We find no evidence that committee membership, even on the vaunted House and Senate Appropriations Committees, influences the ability of legislators to bring pork home to their constituents. Drilling down to specific policy areas, we also find no evidence that membership on Appropriations subcommittees or relevant authorizing committees influences the ability of legislators to procure spending. The only committee positions for which we find any strong evidence of an effect are the leadership positions of Appropriations subcommittees. The cardinals and ranking minority members of these subcommittees procure significantly more outlays for their constituents as a result of their committee positions. Even these powerful figures, however, only have an edge for the programs under their committee's jurisdiction. In other words, the cardinals are big pigs in small troughs.

Why do our results, which are largely null, differ so starkly with the previous literature purporting large effects of committees? First, the effects of committees may have been greater in the "classic era" of Congress when the first empirical studies of committees and pork were conducted, and our results may be a sign that these effects have decreased as a result of institutional changes in Congress. Second, committee positions may influence distributive benefits and other outcomes that are not included in our analysis. However, our results even conflict with previous studies focusing on the same time period and outcomes. In these cases, the most prominent difference between our analyses and previous studies is the research design. Previous studies, relying upon cross-sectional comparisons or even within-district or within-state designs, failed to distinguish selection onto committees from the effects of committees. Our within-member design allows us to separate these effects and show that, while there is significant selection onto committees as evidenced by the naive estimates in Tables 3 and 4, the effects of committee positions are usually minimal.

Our results on the dominance of cardinals and the irrelevance of other committee positions challenge basic aspects of the leading theories of distributive politics. They most directly implicate the "gains from trade" or "committee benefits" hypothesis (Evans 2011). For reasons explained above, we believe ours is the first analysis capable in principle of empirically separating the committee effect from the selection component of this argument. Having done so, we find little support for the theory's central causal prediction, namely that "committee members receive the disproportionate share of the benefits from programs within their jurisdiction" (Weingast and Marshall 1988, p. 149).

Partisan theories of distributive politics (e.g., Cox and McCubbins 1993) also fare poorly in light of our evidence. These theories predict that the majority party allows self-selection of high demanders onto committees with narrow jurisdictions, but not onto committees making broad national policy where maintenance of the party's brand name is paramount. If anyone is well positioned to bring home an extra helping of pork, according to this view, it would be majority party members on narrow-interest committees. Insofar as chairs are always members of the majority party, we find at least some support for the partisan theory in our analysis of Appropriations subcommittee chairs. Moreover, our pooled results (see Table 6) find a roughly 20% estimated advantage for majority party members on House Appropriations subcommittees, although this result falls short of statistical significance at conventional levels and is not duplicated for the Senate. On the other hand, we find that ranking minority members of Appropriations subcommittees do nearly as well as chairs and better than rank-and-file majority party members, which appears at odds with the privileged position of the majority party in these theories. Perhaps as suggested by Groseclose and Snyder (1996) and Alexander, Berry, and Howell (2014), the need to create supermajority coalitions advantages pivotal members of the minority party.

Our analysis also speaks to the long-standing debate over whether committees are representative of the chamber as a whole, as suggested by the informational model (Krehbiel 1991), or whether they are populated by high demanders, as in the gains-from-trade view. Prior studies of this question have relied on roll-call records or district demographics as the point of comparison, with mixed results. By contrast, we document a form of self-selection onto committees that has not been recognized in earlier studies. Members with a track record of successful pork barreling in a particular policy domain are more likely to select onto the relevant committee or Appropriations subcommittee in that domain. Whether their advantage in attracting outlays is due to individual skill or due to attributes of their districts is an open question, but we find no evidence that the committee position itself enhances their success.

In light of the evidence presented here, some of the discipline's canonical theories appear to be at best

incomplete and at worst plainly contradicted by the data. As such, our results call for a reexamination of fundamental aspects of distributive politics. One immediate question is why seats on Appropriations are so coveted among members of Congress if they are largely irrelevant for federal funding. What use is a seat on Appropriations if not to provide more pork for one's constituents? Insofar as existing theories are meant to provide ex-post rationalizations of existing institutional structures, another first-order question for future research is why rank-and-file members of Congress would support a committee system that places particularistic benefits in the hands of a few highly placed members of both parties.

One possible explanation to both sets of questions is that legislators use their committee positions to claim credit, stake positions, and otherwise enhance their reelection chances in ways that do not involve garnering federal projects. Appropriations subcommittee hearings are good opportunities for rank-and-file members to gain attention in their districts and states, brag about the local projects they support, and boost support among constituents. A related possibility is that members sort onto committees in order to achieve policy influence rather than pork. Indeed, nothing in the gains from trade theory requires that the "gains" to be had are pecuniary, although they have generally been understood that way in the literature to date.

An explanation more in keeping with the committee benefits hypothesis is that junior members may vie for a seat on Appropriations in the hopes of later becoming a chair or ranking minority member of a subcommittee. There are enough of these positions that a rank-and-file member of Appropriations can reasonably expect to gain one of them if she sticks around long enough. In a given year, approximately 1 in 3 members of the House Appropriations Committee will be the chair or ranking minority member of one subcommittee, and approximately 1 in 2 will attain one of these positions at some point in their career. The comparable figures are even higher in the Senate where 3 out of 4 members are the chair or ranking minority member of a subcommittee, and 4 out of 5 will achieve one of these positions at some point. Consistent with Shepsle's (1978) account, members may happily wait in the queue to join a particular committee or subcommittee or rise to power within it if the payoff is high enough. Because rank-and-file members of the Appropriations committee receive little benefit immediately but hope to attain a powerful position as a cardinal in the future, pork-barrel politics may have more of a tournament structure than has been recognized previously. In fact, if members of Congress aim to create a system which maximizes the productivity of committee members, perhaps because there are positive externalities to such effort, they might create this kind of winner-take-all tournament.[13]

Ironically, our strongest result—that chairs and ranking minority members of subcommittees are the only ones to enjoy clear distributive benefits from membership on Appropriations—is one with relatively little basis in established distributive theories. While some journalistic accounts of the appropriations process tout the cardinals, we find scant mention of these actors in canonical political science theories of distributive politics. Indeed, to the extent that the cardinals appear at all in the literature, as in Evans (2004), they are portrayed more as dispensers of pork-barrel projects than as accumulators of such benefits. Our results challenge scholars, journalists, and pundits to devote more attention to the powerful cardinals of Congress. Outside this important exception, the influence of committee positions on federal spending is far more limited than previously thought.

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[13] See Lazear and Rosen (1981) for the canonical model of tournaments and incentives, and see Cameron, de Figueiredo, and Lewis (2013) and Montagnes and Jiang (2014) for applications of these incentive schemes in politics.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Table A1: Proportion of Committee Members Who Were Off Committee at Some Point.

Table A2: Proportion of Appropriations Subcommittee Members Who Were Off the Subcommittee at Some Point.

Table A3: Effect of Senate Committee Representation (IV Estimates).

Table A4: Variation in Senate Committee Effects According to the Other Senator.

Table A5: Variation in House Committee Effects According to Senators.

Table A6: Senate Appropriations Committee Status and Non-germane Outlays (DV = Log Dollars).

Table A7: House Appropriations Committee Status and Non-germane Outlays (DV = Log Dollars).

Table A8: Senate Authorizing Committee Status and Germane Outlays (DV = Log Dollars).

Table A9: House Authorizing Committee Status and Germane Outlays (DV = Log Dollars).

Table A10: Senate Committees and Formula Spending across Policy Domains.

Table A11: House Committees and Formula Spending across Policy Domains.

Table A12: Is the Ranking Minority Effect Greater before Electoral Turnover?

Table A13: Do the Effects of Subcommittee Status Vary by Party?

Table A14: Senate Committees and Additional Measures of Pork.