Parties and the Politics of Pork in the U.S. Senate

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Abstract

In this paper we consider the potential for majority party advantage and corresponding electoral rewards in the U.S. Senate by exploring the distribution of pork barrel projects. Using a unique dataset that includes a host of earmarks added at various stages of the legislative process, we build on partisan and universalistic theories to determine the mode by which these sorts of credit claiming opportunities are distributed in the upper chamber. Our results indicate that the majority party receives a disproportionate share of pork dollars. We further demonstrate that bringing home pork has positive ramifications on Election Day, thereby offering an empirical basis for why the majority party seeks advantage in this area.

Introduction

In recent years, members of Congress have engaged in a rapidly accelerating push for particularistic benefits (or pork) for their constituents; notwithstanding the dismay expressed by many observers and budget hawks. Further, in the wake of scandals involving legislators and lobbyists like Jack Abramoff, critics have grown more vocal in decrying the practice of inserting pet projects into appropriations legislation via line items that send federal funds back home. In contrast, many members of Congress realize the potential value of earmark efforts. As Mayhew (1974) observed, such activities may reap electoral rewards in the form of credit claiming opportunities. Yet, key questions about the distribution of such earmarks and their influence in the electoral politics of the Senate remain unanswered and largely unaddressed. For instance, do majority party members in the Senate receive more than their "share" of pork? And does more pork translate into more votes?

The ubiquity of pork barrel spending is a hallmark of the modern Congress, and as such, scholars have sought to explain the distributional mechanisms that allocate funds across states and districts. Most of these accounts focus on certain types of programs or in some cases categories of earmarks (funds designated for a specific purpose). Our initial aim in this paper is to consider more fully the potential for party effects in the Senate, using the distribution of pork in the upper chamber as our vehicle for analysis. As such, we use a particular class of pork barrel spending that spans a wide range of policy areas as a tool to gauge whether the majority party has an advantage in this particular distributive politics game in the Senate.

At first glance, the Senate with its more collegial leadership style and distribution of power is perhaps not a strong candidate for exploring the role of parties. However, the chamber occupies a position in the sequence of the appropriations process that offers senators many opportunities to exert influence (Fenno 1966), and the must-pass nature of appropriations legislation presumably makes it an appealing vehicle for partisan advantage. Furthermore, as the change in party control of the chamber that occurred following the Jeffords switch in 2001 suggests, parties stood to gain or lose significant resources even in the area of pork barrel spending based on their majority or minority status. News coverage of the appropriations process following the switch indicated that Senate Democrats, upon assuming the reins of the Appropriations Committee, "wield[ed] power" and initiated a "feast on pork," while their Republican counterparts in many cases witnessed a steep decline in project funding (Bolton 2001). And of course, the interest in pork presupposes that constituents reward their senators with more votes when they successfully target federal projects (and the dollars that accompany them) to their home states. In this vein, the second prong of our analysis examines the extent to which direct electoral effects can be attributed to the success of senators at the pork barrel.

In the following section, we begin with a review of the literature on distributive and partisan theories before turning to our treatment of congressional earmarks. Next, we describe the data and methods employed in our analysis, and present descriptive and then regression results accounting for the role of parties, institutional status, and other factors on the allocation of pork. We then consider whether the majority advantage in the distributive politics game translates into an increase in senators' vote shares. The final section concludes and offers some extensions for future research.

Universalistic and Partisan Theories of Politics

Previous scholarship on the appropriations process has typically been grounded in one of two broader theoretical approaches to studying legislative organization: distributive theories of lawmaking or the more recently emergent class of theories that argue that party plays a consequential role in deciding legislative outcomes.

Distributive (or gains-from-exchange) theories were developed by Mayhew (1974), Fiorina (1977), Weingast (1979), Ferejohn (1986), Shepsle and Weingast (1987) and Weingast and Marshall (1988). In short, they posit that the internal operations of Congress are designed to promote the distribution of policy benefits to electorally important constituencies. These theories suggest a state of the world where the committee system exists in order to facilitate log-rolling across issue dimensions and helps to solve the collective action problems inherent in a legislative body where members want to vote with their districts in order to get reelected (Mayhew 1974, Arnold 1990). If members are placed (or self-select) onto committees that best represent their constituents' interests and then report bills to the floor dealing with that specific jurisdiction, then other non-committee members will vote with that committee since it does not harm them (or their reelection chances) due to the multidimensionality of issues. Further, in an important addition to distributive theories, Weingast and Marshall (1988) argue that since the committees have gate-keeping power over their specific policy area and members have control over their committee seats due to the (no-longer sacrosanct) seniority rule, logrolling will be institutionally supported.

Shepsle and Weingast (1981) build on the early distributive theories to develop a formal model to explain the universalism inherent in distributional politics that results

from members' uncertainty over who will be part of future winning coalitions. Their model tries to resolve the difference between the minimal winning coalition arguments made by Buchanan and Tullock (1962) and Riker (1962) and the empirical reality of universalism present over various issue areas (Mass 1951; Froman 1967; Manley 1970; Rundquist 1973; Ferejohn 1974; Mayhew 1974).

In positing universalism, Shepsle and Weingast (1981) argue that this dynamic applies even in a partisan world. If parties are strong and members are certain of remaining in the majority in the future, then universalism should be spread across all members of the majority party, not just a minimal winning coalition within the party. However, if members are uncertain about remaining in the majority party over the course of their careers, or parties cannot enforce discipline they may prefer a more universalistic mode of distributing benefits.[1] This may be the case in the Senate where party leaders do not possess the powers given to the Speaker of the House. Although many policy areas are supported by small, intense coalitions (Stein and Bickers 1994, 1995), these groups need the support of a majority, or (in the case of the Senate) a supermajority, so universalism may still hold. As our empirical results will show, and for reasons we discuss later, the majority party will keep a greater share of pork dollars for its members.

In contrast to distributional theories of lawmaking, Cox and McCubbins' (1993, 2001, 2002, 2005) cartel model and the conditional party government theory of Rohde (1991) and Aldrich and Rohde (1998, 2000a, 2001) posit a partisan theory of lawmaking in the U.S. House.[2] Partisan models have been applied directly to the appropriations process as well (Kiewiet and McCubbins 1985, 1991; Aldrich & Rohde 2000b). Cartel

[1] See Wawro and Schickler (2004) for a test of universalism in the Senate.
[2] We would refer the reader to Cox and McCubbins (2005) for a more thorough review of the congressional organization literature. For criticism of partisan theories, see e.g., (Krehbiel 1993, 1999, and 2000).

theory tells us that the key to legislative success in Congress lies in controlling the agenda. Parties act as procedural cartels by exercising negative agenda control to assure that no legislation reaches the floor that could possibly split the party or move the status quo in ways that are unfavorable to the party. To make certain that such legislation does not receive a floor vote, rank-and-file members are expected to support the party on procedural votes (such as special rules votes in the House or the motion to table in the Senate) in exchange for the possibility of securing a more powerful position in the institution and increasing the probability of maintaining (or achieving) majority status.

Conditional party government argues that party strength is conditional on internal party homogeneity and external heterogeneity between the two parties. When both conditions hold, rank-and-file members give up power to the leadership so the party can "encourage" members to act in ways to further the party's goals. One way to stay in favor with the leadership is to vote with the party when needed on important legislation. If sending money to districts, or states, improves the chances of winning reelection as posited by Mayhew (1974), and hence remaining in the majority, then parties will have reason to make sure the bulk of the goods go to their district.

Balla et al. (2002), who straddle the partisan and distributive literatures, find that the likelihood of receiving a pork barrel project is distributed evenly between the majority and minority parties in the House but that the majority enjoys an advantage in the dollar amount of earmarks. Thus, the majority is insulated from being blamed for fiscal irresponsibility but maintains an advantage by spending more on their constituents than the minority. Their findings help to reconcile the universal theories of distributive politics discussed previously with other majoritarian theories of lawmaking that are

consistent with empirical findings (Levitt and Snyder 1995; Carsey and Rundquist 1999; Lee and Oppenheimer 1999, Lee 2000).

Interestingly, Balla et al. (2002) find that partisan advantage appeared to be associated only with the lower chamber and not the Senate. This finding of no party influence in the Senate, the authors argue, is consistent with the literature that describes a weak party system in the Senate (Huitt 1961; Ripley 1969; Sinclair 1989). Additionally, as the authors themselves note, their test is limited to one type of pork in a single policy area—academic earmarks. Similarly, in recent work, Evans (2004) finds that bipartisanship dominated the distribution of earmarks covered in her analysis of three fiscal years of Senate appropriations data. We think it is worthwhile to revisit these null findings in the Senate by looking across a broader set of pork barrel projects in the context of a theoretical account for majority party advantage that also incorporates an examination of the electoral implications of success in this arena.

Majority Advantage in the Senate

Is there reason to expect the majority party, particularly in the more consensual Senate, to seek advantage in the realm of pork? The first body of theoretical work (distributive politics) suggests that legislators should receive pork in a universalistic fashion with something for everyone. Members of Congress will logroll across the various subsets of policies in order to assure funding for their specific set of preferred projects. In contrast, partisan theories hold the potential for a view that includes a role for political parties in the distributive politics game. If the reelection rates of incumbents who bring home more goods for their district are higher, then the majority party has an

incentive to make sure its members obtain, on average, more than the minority party. Thus, when it comes to passing out pork dollars, the majority party should use its powers to receive more than the minority.

Since distributive theories have dealt almost exclusively with the House, what about pork in the Senate? Certainly one possibility is that pork is distributed in a universalistic fashion, in which case each senator obtains an equal piece of the pie. Alternatively, it could be that parties play a role in the distribution of pork dollars. If that is the case, the majority party should keep more of the pork for themselves. We believe that a partisan account will offer significant traction in explaining the dynamics of pork in the Senate because the majority party is able to maintain their advantage by virtue of the procedural tools available to them at each stage of the legislative process.

First and foremost, the appropriations bills are effectively must-pass legislation since failure to do so would cause a government shutdown.[3] As such, efforts by the minority to prevent the bills from ever coming to a vote through a filibuster would not be desirable since they would likely be portrayed by the majority as obstructionist. In fact, these measures usually pass by large margins in both chambers because there is usually something for nearly everyone in the bills.

At the initial subcommittee and committee mark-up stages where pork projects could be added, the majority party, by definition, has a majority of the votes so they should be able to shape the legislation largely as they see fit. Majority members have the power of the gavel at both levels so they have an advantage when it comes to calling

[3] In theory, the Congress could pass a series of continuing resolutions to keep the government running but this is not a feasible long term solution, nor is letting the government shut down, as the Republicans learned in the budget battles with President Clinton. Of course, the separate bills may be combined into one or more omnibus measures if so desired.

witnesses for hearings and scheduling times for mark-up. Although this may appear minor, the ability to schedule votes or mark-ups at the discretion of the chair makes it difficult to catch the majority off guard in the hope of winning an occasional vote. Furthermore, it is difficult to imagine why minority members with some pork would attempt to stymie the committee bill when doing so could affect their prospects for success in the current instance as well as in future iterations, which cast a long shadow in the Senate.[4] Once members of the sub- and full committees are content with legislation, then working the bill through the floor should be easier. If this is indeed the case, then we should expect to find that members who serve on the Appropriations Committee from either party should receive more pork compared to their colleagues. However, members from the majority party on the committee should obtain more than minority party members.

During the next stage of the process, legislating on the floor, the majority continues to hold an advantage. Although any member can offer amendments on the floor, the majority has available the motion to table, which if adopted effectively kills amendments offered by the minority without directly voting on them. This motion is not open to debate so it becomes useful for the majority to stifle minority attempts to add additional earmarks. As Den Hartog and Monroe (2006) have demonstrated, the majority party is nearly always successful in the use of the motion to table. If necessary, the majority leader can also use his right of first recognition to fill the amendment tree (see Schiller 2000a) to fend off any unwanted amendments.

[4] Even a cursory look at the committee stage suggests a high degree of consensus in that there are rarely more than a handful of recorded votes. Thus, most senators seem satisfied with perfunctory voice votes to move bills through committee.

What might this process look like in practice? It may be the case that there is a fight over pork at various stages in the appropriations process and the majority party is forced to use the tools available to them to keep the minority at bay in order to maintain their pork advantage. Alternatively, it is possible that at the beginning of the appropriations process the two parties arrive at an informal agreement in regards to the distribution of pork in the upper chamber – with the majority party taking more per member than the minority party. This type of arrangement, however, will only stand if the minority knows the majority has the procedural advantage to support the agreement. Further, minority party members may be willing to consent to such an agreement and take a share of pork less than their share of seats in the chamber based on the realization that accommodation at the committee stage is a more profitable strategy than delay or obstruction. No matter how the process unfolds, it is unlikely that minority party members would agree to keep a smaller portion of pork dollars if they had the power to take more. Given the procedural advantages that accrue to the majority party at each stage of the process, we believe there is good reason to expect the majority party to accrue a disproportionate share of pork dollars and suspect that this is what will be revealed in the data on earmarks.

Data and Method

To examine the influence of partisan, institutional, and electoral factors on the allocation of earmarks in the Senate, and to assess the impact of distributive politics in Senate elections, we employ a compilation of "pork" projects identified by the nonprofit, nonpartisan organization Citizens Against Government Waste (CAGW). Since 1991,

CAGW has released an annual report summarizing the pork-barrel projects contained in the (typically) thirteen appropriations bills that fund the various activities of the federal government. According to CAGW's definition, "a 'pork' project is a line-item in an appropriations bill that designates tax dollars for a specific purpose in circumvention of established budgetary procedures." In order to be included in the annual report, a project must meet at least two of the following criteria: requested by only one chamber of Congress, not specifically authorized, not competitively awarded, not requested by the president, greatly exceed the president's budget request or the previous year's funding, not the subject of congressional hearings, or serve only a local or special interest.[5] In practice, every project identified by CAGW meets the last criterion, so that what distinguishes the various projects is the way in which they were added outside of the conventional appropriations process. CAGW is careful to note that theirs is not a comprehensive list of earmarks, in that earmarks, which designate funds for a specific beneficiary or locality, may or may not be included via established budgetary procedures. As such, only those earmarks inserted outside the established rules are categorized as pork. Recent reports by the Congressional Research Service that document similar trends in earmarks, as well as a database produced by the Office of Management and Budget, corroborate the CAGW's definition and measurement of pork. [6]

[5] This and much additional information is available from CAGW's website: http://www.cagw.org.

[6] See http://earmarks.omb.gov/. Although one could argue that these data are not a perfect measure of pork since some earmarks are excluded and pork certainly is encompassed in other types and areas of government spending, they do provide a consistent measure of a defined (by CAGW) distributive good. Further, another possible drawback to these data is they do not indicate when appropriations money is actually spent. For example, the money for a multimillion dollar project may be spent over several years but listed as only one earmark. However, unless there is a bias in coding between the majority and minority parties we feel that they are adequate for the task at hand—namely, determining if this good is distributed in a universalistic fashion or if the majority is advantaged vis-à-vis the minority.

Many accounts have described the significant growth over recent years in the number and scope of pork projects. While explaining the trend is not the aim of this paper, the pattern is clearly borne out in the data compiled by CAGW. Figure 1 summarizing the number of projects and the total dollar value for fiscal years 1991 through 2005, both of which exhibit high rates of growth during the period.[7]

Each project identified is coded according to its status in the legislative process: whether it was inserted into the legislation at the request of only the House or the Senate, whether there was no budget request for the project by the administration, whether the project was inserted at the conference committee stage, or some combination of these. A unique aspect of this data and our analysis, then, is our ability to parse out chamber-specific effects. While previous studies have examined the overall distribution of pork, we are able to isolate and investigate the effects of Senate-specific factors in the allocation of pork to states within the Senate appropriations process exclusive of what occurs in the House or in conference. For each fiscal year, we created three summary measures of pork at the state level that will serve as dependent variables in our analysis: the total dollar value of all pork projects, the total dollar value of pork projects inserted via Senate action, and the total dollar value of pork projects added in conference. We also accounted for the total dollar value of pork added in the House. Because one might expect what happens on the House side to impact choices in the Senate (Fenno 1966), which by tradition moves second, it is important to control for this dynamic.

[7] Preliminary reports indicate that while the number of projects declined for FY06, possibly in reaction to lobbying reform efforts, the number of pork dollars increased.

Descriptive Measure of Pork

We begin our look at the data by taking up, in a descriptive fashion, change across time in the type of pork considered here, as well as how it is distributed among various groups of senators. We commence with fiscal year 1996, as this is the first year in which the complete pork database is available. If pork were distributed in a universalistic fashion, a naïve prediction might be that beneficiaries are arrayed relatively equally regardless of ideological or partisan characteristics. Figure 2 divides senators into deciles based on their DW-NOMINATE scores, where the ten most liberal senators appear in the first decile and the ten most conservative appear in the tenth decile. The bars over each group represent the total amount of pork going to the states of the senators in that decile. Of course, this figure double counts the total amount of pork because the pork going to any particular state is counted for both senators of that state.[8] Nevertheless, this provides us with some preliminary evidence regarding the distribution of pork dollars within the Senate. If pork was delivered in a universal fashion, we might expect to see bars of relatively equal magnitude for each decile. Although this may be the case for 1996 and 1997, when Mark Hatfield (R-OR) chaired the committee and there was little pork to go around, it does not seem to hold for the rest of the time period. Instead, we see a bimodal distribution with peaks near the center of the two respective parties, a pattern that could be considered consistent with a theory where party plays a role in the legislative process. When the Democrats controlled the appropriations process for fiscal years 2002 and 2003, the majority of the pork is in the five liberal deciles. The opposite holds true for the remaining years when the Republicans were in the majority. Thus, this figure seems

[8] The figure is similar if we only include observations where Senators representing any particular state are both from the same party.

to offer prima facie evidence that there may well be a systematic partisan component worth exploring.

Next, Figure 3 displays the breakdown in pork by chamber and then delegation type. In the left panel we show the percentage of pork dollars that were added at the House, Senate or conference stage of the appropriations process, while the right panel displays the distribution of pork dollars by delegation type for only those projects that senators added for their states. Since the dollars spent grew from the beginning to the end of our data, by examining the relative percentage of projects added in each stage we may get an indication of different dynamics between each chamber and delegation type.

In the left panel, we see that over the entire period, the bulk of the pork dollars came from projects added before the conference committee with 46 and 38 percent of the dollars added in the Senate and House, respectively, and only 16 percent at the conference stage. In some years more dollars were added in the House compared to the Senate, but in each case the chamber-added projects exceed those added in conference. The right panel focuses on just the Senate. The upper portion of the figure is for states that had two minority senators in the delegation, the middle portion are states with a split delegation and the lower portion are states with two senators serving in the majority party. For every fiscal year except 1997, states with a majority party delegation received a plurality of pork dollars. On average, states with a majority delegation received 21 percentage points more pork than states with a minority party delegation. In 1998 this difference was the greatest with 64 percent going to states with two majority party members and only 12 percent of pork dollars being spent in states represented by the

minority party only. This figure, then, is also suggestive a majority party advantage in the Senate when it comes to pork dollars.

Analysis and Results

Having presented a descriptive picture of some of the dynamics surrounding pork distribution, we now turn to more systematic analyses. We begin with a look at the factors that influence the distribution of pork among the states, and then turn our attention to the electoral ramifications for senators based on their success at the pork barrel. To be clear, our unit of analysis in the first set of results focuses on states, while the second relies on measures at the level of the individual senator. Based on the expectations described earlier, our models of pork allocation center on a number of predictors. Of primary interest are the variables relating to majority party status. To measure the degree to which the majority party receives a disproportionate share of pork, we examine the status of the Senate majority party within the state using two variables. States with two senators in the majority party are classified as having a *Majority Party Delegation*, while those with only one majority party member are labeled *Split Party Delegation*. The baseline category is made up of those states with two minority party senators.[9] If there is a general benefit for the majority party, we should expect states with a majority party delegation in the Senate to procure a significantly greater amount of pork, even after we control for other institutional factors.

[9] Our data do not allow us to disentangle which senator received a pork project. Since both of the senators from a state can claim credit for delivering pork, this coding scheme seemed appropriate. Our measures depart slightly from those of Balla, et al., who employ a single summary measure of majority party strength coded 0, 1, 2 according to a count of the delegation. For our purposes, we are interested in exploring differences across delegation types and do not have a theoretical expectation that the payoff is proportional and increases linearly for each additional majority party senator from a particular state, an assumption that is implicitly made by Balla et al. The results using this measure in place of ours are substantively similar.

Because members of the Appropriations Committee are in an advantageous position to steer pork back to their states, we expect them to garner considerably more pork than their colleagues who are not seated on the committee. Committee members of the majority party who chair the full committee or one of its subcommittees should fare better than ranking minority members and backbenchers, respectively, to the degree that partisan and organizational accounts explain pork allocation. Accordingly, we measure the effect of holding the following positions: *Appropriations Chair*, *Appropriations Subcommittee Chair*, *Appropriations Ranking Member*, and *Appropriations Subcommittee Ranking Member*.[10] We also include control variables for *House Appropriations Chair*, *House Appropriations Ranking Member*, *House Appropriations Subcommittee Chair*, and *House Appropriations Subcommittee Ranking Member* in those models where the dependent variable includes projects inserted by members of the other chamber.[11] For each of the dichotomous variables listed above, we code them 1 if the condition is present, 0 otherwise. Also, to account for the potential that Senate appropriation decisions are influenced by what occurred previously in the process under House consideration, we control for the dollar value of *House Pork Projects* in the model estimating Senate pork.

Similarly, party leaders are likely to accrue benefits from the pork barrel process. In the cartel perspective, this benefit may be an inducement for the internalization of the costs of organizing the party. To capture leadership effects, we code *Senate Party Leader*

[10] In the reported full models, we do not include a separate indicator for simple membership on the committee in that nearly every member either chairs or sits as ranking member of a subcommittee. In an alternative model we included the additional variable control variable of committee membership. This variable was never significant and at times the coefficient was negative—classic signs of multicollinearity.
[11] Because a supermajority of states enjoys representation on the HAC (approximately 70%), we do not include an indicator for it.

as "1" for those states represented by either of the party leaders or chief party whips. *House Party Leader* similarly indicates state representation by the Speaker or the Democratic or Republican floor leader or whip.

In addition to the partisan and institutional variables, we consider the potential role of the electoral cycle. One might expect a senator who is up for election to be more active in the quest for credit claiming opportunities. As such, *Up for Reelection* is a dichotomous indicator for a state in which a Senate seat will be contested in the next election. This measure is interacted with a majority status indicator in order to capture whether there is a majority party Senate seat up for election in the next cycle: *Up for Reelection (Majority).*[12] Additionally, as some have predicted that the majority party will be more likely to exclude the minority from the benefits of pork as their margin increases and they feel more secure in their majority status, we control for *Majority Party Size*, which is simply the number of seats held by the party in power. The *Population* measure accounts for the potential for pork distribution to vary according to state size (Lee and Oppenheimer 1999). Finally, the models include year fixed effects to control for any year-to-year changes. In each of the three models that follow, our dependent variable is the amount of pork awarded to a particular state in $10,000s.

The first column of Table 1 presents the results of our OLS analysis of total funding at the state level for pork projects inserted via the Senate appropriations process. The variables of primary interest relate to the majority party status of the state delegation as well as the partisan nature of key positions of institutional power. We find support for

[12] In specifying the electoral variables, we were faced with the ubiquitous problem of determining *when* an incumbent determines whether or not to run for reelection, and how that affects efforts at acquiring pork. An alternative is to code those seats in which an incumbent actually ran for reelection, rather than whether a seat is in cycle. A model estimated on this basis yields substantively identical results.

the hypothesis that majority party members fare better than their minority counterparts.[13] In particular, states with two majority party senators receive about $15 million more in pork than states with two minority party senators (the baseline category). Split delegations are not statistically distinguishable from minority party delegations.

Continuing with partisan factors relating to committee status, the home state of the Appropriations Committee Chair garners approximately $157.5 million more in project funds than their non-committee majority party counterparts, while states represented by the ranking member of the full committee bring home approximately $62 million more than states without a seat on the committee. The difference in favor of the chair relative to the ranking member is in this case statistically significant at $p = 0.05$. Finally, states with a senator who chaired one of the Appropriations subcommittees or sat as the minority ranking member accrued $49.8 million and $35.7 million more, respectively, than states that lacked membership on the committee. Recall, the (subcommittee) chair amount is in addition to the extra money they receive for being a member of the majority party.

States with a senator in the party leadership also received an additional bonus of approximately $44.5 million. The variables measuring electoral effects (e.g., whether a senator from the state was up for reelection) do not obtain significance at conventional levels, nor does state population.[14] However, there is a systematic relationship between the size of the majority party and the amount of pork that gets distributed among the states. For instance, an increase of two seats in the majority party's margin carries with it an increase of about $13 million in pork per state. Finally, and somewhat surprisingly, it

[13] We continue to find a majority party advantage when state fixed effects are included.
[14] We performed joint significance tests on the composite variables of the interaction, and in neither this nor the subsequent estimations were the tests significant.

does not appear that the amount of pork a state receives in the House has an impact on how well the state fares in the Senate.

Turning to the second column of Table 1, we can observe the effect of these same variables, as well as some House-specific indicators, on the total amount of pork received by states across all stages of the appropriations process—within the House, the Senate, conference, etc. The majority party delegation effect as well as those for majority party senators holding either the full committee or a subcommittee chair continue to exert a noticeable impact on state-level pork. Similarly, states with minority ranking members at either level, as well as those with representation in the leadership, do better than the others.

One notable difference between this and the preceding model is that state population makes a difference in the *total* allotment of pork. That is, when we include pork added by the House and in conference, large states get more (as one might expect based on a per capita rationale). While the same was not true of pork added by the Senate, in the aggregate a smaller state such as Nebraska (ranked 38th in population in 2004) would garner $20 million, while a state with mean population (e.g., Missouri) carries approximately $66 million in pork projects, *ceteris paribus*. One standard deviation above the mean is Ohio, whose extra funding due to population is estimated to be more than $134 million.

Finally, in the full model we see that states with well-placed House members are disproportionately affected as well. For instance, holding the chair of the House Appropriations Committee (HAC) produces a benefit more than three times as high as that of the Senate Appropriations Committee (SAC). Interestingly, there seems to be a

strong negative effect on pork production when it comes to the minority side of the aisle. Those states represented by a House member that serves as ranking member of the full committee or one of its subcommittees receive considerably less pork. Because our interest centers on the Senate, we do not explore this finding in greater depth, but it may well be the case that after controlling for other House-related factors this result will dissipate. Finally, states with a House member who chairs a subcommittee of the HAC or serves in the party leadership do not appear to be impacted either positively or negatively in the distribution of pork.

We also estimate a model of pork projects added in conference to determine the extent to which the same factors make a difference at that stage. These results appear in the final column of Table 1. In this case, the partisan makeup of a state's Senate delegation has no discernible impact on pork added in conference. In contrast, states with a senator seated on the Appropriations Committee (whether on the majority or minority side) do better than those without such representation. Similarly, there is a benefit to having a senator in the party leadership. While beyond the scope of this analysis, future work may consider composition of the conference committee as an explanatory variable.

As was true for both of the earlier models, size of the majority party makes a difference—the larger the majority, the more pork dollars states receive. And state population, which did not matter in the Senate-only results, does appear to increase funds added in conference, although the size of the coefficient is only about 25% of that in the full model. Last, there continues to be a positive effect for the state the HAC chair calls home and a negative effect for the home state of the ranking member.

Electoral Connection

The preceding results offer insights into the various factors that influence the distribution of pork dollars. However interesting the findings may be from a policy perspective, they say little about the electoral ramifications. If senators are indeed interested in obtaining pork at least in part because of its perceived electoral benefits, the next step of our analysis involves establishing the extent to which such behavior is systematically related to the electoral fortunes of incumbents.

Prior scholarship has grappled with the electoral effects of pork with mixed results. There is some evidence that success at the pork barrel, or in constituency-oriented politics more generally, translates into more votes on election day, although such findings are typically highly qualified or indirect in nature and always focus on the House (e.g., Cain, Ferejohn, and Fiorina 1987, Bickers and Stein 1996; Alvarez and Saving 1997; Sellers 1997). Perhaps most important for an analysis the likes of which we conduct here is whether or not efficiency in pork barreling may speak to a senators' overall job performance, which may well be tied up in their experience in office (seniority). That is to say, finding direct effects of pork, not to mention constituency service more broadly, is difficult. Thus, on its face, the deck seems rather stacked against uncovering a direct electoral effect of pork.

To assess the electoral impact of pork, we turn to a conventional OLS regression analysis of incumbent vote margins. The key variable of interest is the amount of *Pork Per Capita* added to appropriations legislation in the Senate over the two years prior to the election. Pork is measured on a per capita basis since a dollar spent in a large state is

not as noticeable as the same dollar spent in a comparatively small state.[15] This measure augments the standard variables that previous studies have established as influential in congressional elections (see, e.g., Abramowitz 1988, Jacobson 1999), foremost among which are the incumbent's *Previous Vote* share (of the two-party vote); *State Partisanship*, which controls for the underlying partisanship of the electoral district absent incumbent effects and is measured by the share of the two-party vote received by the presidential candidate of the incumbent's party in the most recent election; *Challenger quality*, indicating whether the opponent had previously held elective office; and the *Spending Differential* between the two candidates, measured as the difference between the log of incumbent spending and the log of challenger spending (Erikson and Palfrey 1998, Jacobson 1980). Some studies of Senate elections control for *State population*, seniority or *Freshman* status of the incumbent, and whether the incumbent is a member of the president's party in a *Midterm* election year (Abramowitz 1988, Carson 2005), so we include these as well.

Table 2 presents the results relating to the dollar amount of pork per capita, and its effect on incumbent vote share after accounting for the relevant control variables.[16] In short, the amount of pork a senator brings home exhibits a positive and statistically significant effect on senators' electoral margins. Interestingly, the size of the pork effect is about the same as that of challenger quality, suggesting that senators have at their

[15] In the preceding models, we did not use per capita measures because, *ceteris paribus*, members desire as much pork as possible. As such, we simply controlled for state population in the models. In the present case, however, since we are interested in the visibility of pork, the per capita measure is appropriate.
[16] This model was estimated with year fixed effects. We began this analysis by examining a scatterplot of pork and vote share, as well as the regression residuals, and found that in 2002, Alaska (represented by Senator Ted Stevens) secured $735 per capita, a stark outlier. Calculation of Cook's D as well as measures of leverage such as DFFITS clearly distinguish this case from the others. As such, it is not included in the results presented, although they are robust to a regression on the full sample using an appropriate correction such as least absolute value regression.

disposal a resource that can have major electoral benefits for them. To make the substantive effect a bit clearer, what this means is that, with a mean level of pork per capita of $50, a shift from $0.20 (the sample minimum) to one standard deviation above the mean ($150 per capita) carries with it an increase in vote share of approximately 2 percent. In contrast, when faced with a quality challenger, an incumbent senator's vote share typically declines by about 3 percent. The effect of the conventional controls—previous vote, presidential vote, the presence of a quality challenger, and campaign spending—are all significant and consistent with prior studies. Furthermore, the electoral effect of pork holds in the context of a control for freshman status, which provides some assurance that our pork measure is not simply tapping a different or spurious dynamic—whereby for instance senior members who have a seat the appropriations table or have learned the ropes of constituency service more broadly—are the ones who are actually benefitting. The findings are substantively unchanged when seniority is substituted for freshman status.

Thus, the estimates of the effect of pork on electoral success corroborate what most observers, members of Congress, and the conventional wisdom suggest—success at the pork barrel carries with it success at the ballot box. And most interestingly, this effect holds in the Senate (which to our knowledge has not been examined previously), and in a fashion that demonstrates a direct electoral effect for pork. Therefore, it is not surprising that the majority party attempts to advantage itself in this area of policymaking.

Conclusion

In this paper, we began with the notion that, despite the longstanding view of the Senate as a more consensus-based, universalistic body, the majority party should have the upper hand when it comes to the distribution of pork. The majority has good reason to work toward keeping a disproportionate share of pork dollars for itself, and because it possesses certain institutional advantages, should be able to ensure that pork is distributed more or less how the party sees fit. Through a new dataset that measures where pork was added in the legislative process, we were able to test these hypotheses and found results consistent with our theory. That is, when it comes to handing out pork dollars, the majority party maintains an advantage. While previous research was not able to uncover evidence of partisan advantage in the Senate, by looking across a broader range of pork barrel projects we demonstrated that majority party advantages extend beyond the House. This result is important because it is not specific to any particular policy area, and documents party effects in a chamber typically believed to be devoid of party influence.

Additionally, we undertook an examination of the electoral effects of pork to determine whether the presupposed majority party interest in exploiting earmarks carried with it payoffs come Election Day. And in fact, our results suggest that it does. Senators receive a benefit from such particularism that is of similar magnitude to that of quality challenger effects. This finding is remarkable in that, unlike prior research that has dealt exclusively with the House, the effect is both significant and direct—that is, unmediated by partisan or other considerations.

In the future, we plan to explore in greater detail the process by which pork is added to appropriations bills. For instance, one dynamic that merits consideration is the

relationship between same-state senators in the appropriations process, an issue touched upon by Schiller (2000b). Of course, an analysis along these lines would require different data that would allow us to directly link particular projects to specific members of Congress. Also, it will be worthwhile to examine the means by which pork is distributed in conference committees since the strategic considerations at this late stage of the appropriations process may well be different, and possibly influenced more by the leadership, relative to the committee stage. And finally, in the wake of recent scandals and congressional reform proposals, it will be interesting to observe whether the earmark process is changed. The success of Republican appropriators in the House late in the 109th Congress, who warded off efforts to put sunshine provisions on earmarks, indicates that members are likely to chafe at significant reform, although the young Democratic majority has made some strides in this respect.

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Figure 1: Dollar Value and Number of Pork Projects

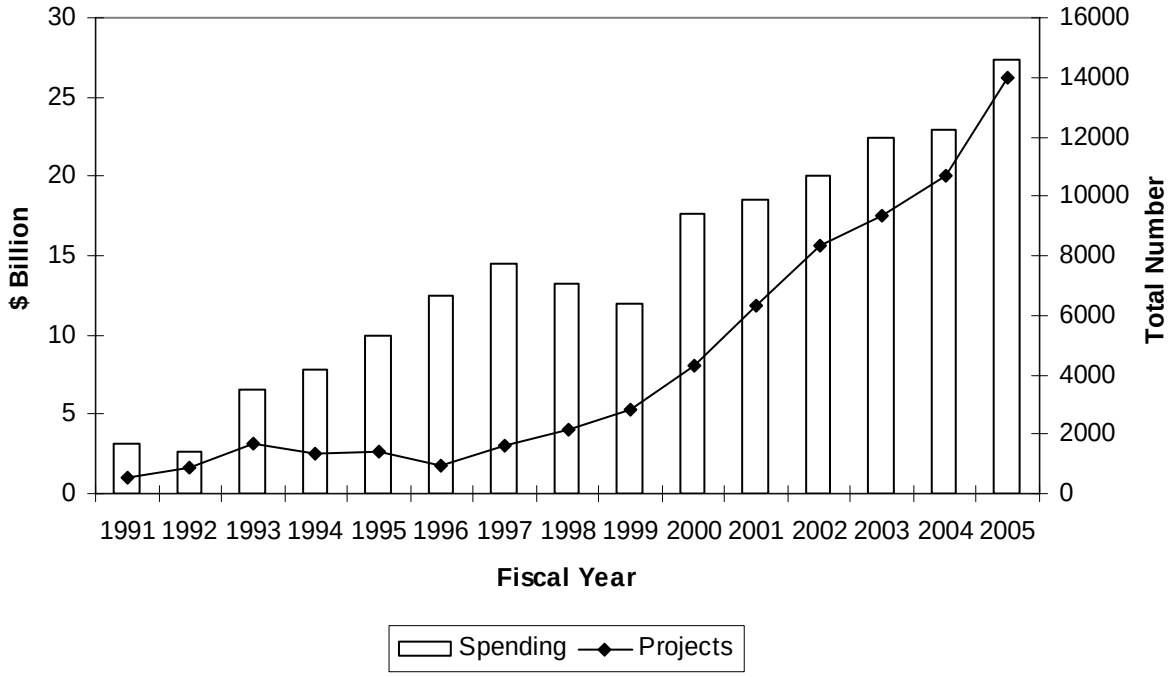

Figure 2: Distribution of Pork Dollars by DW-NOMINATE Decile

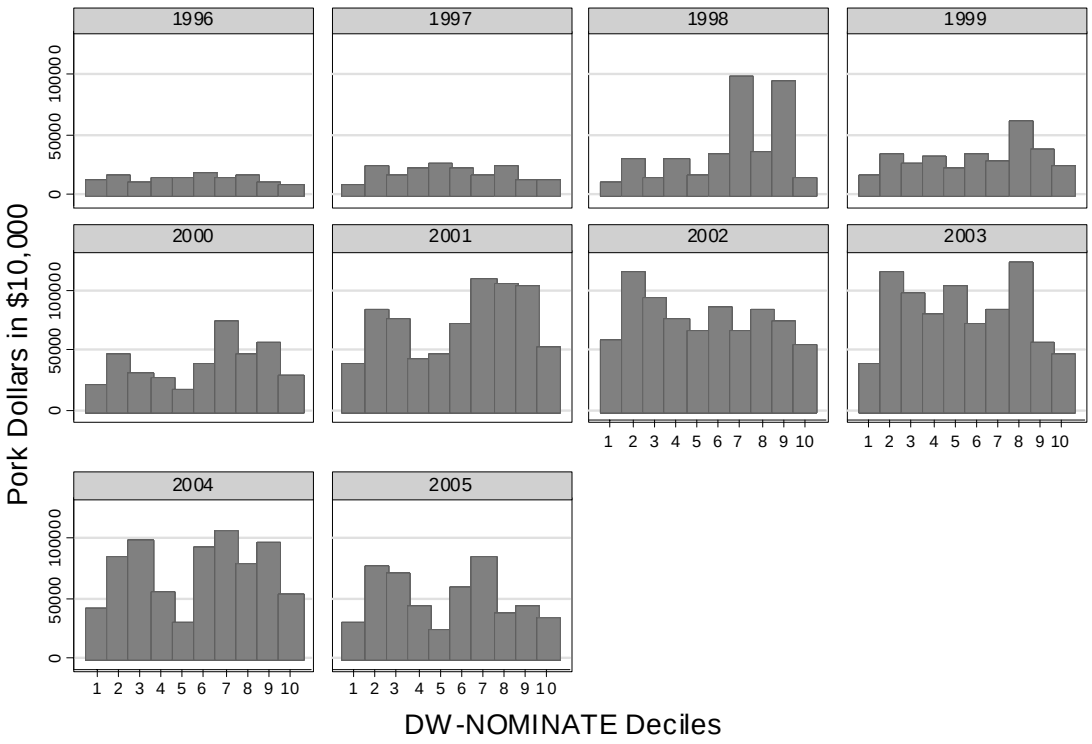

Figure 3: Chamber and Delegation Differences in Pork Distribution

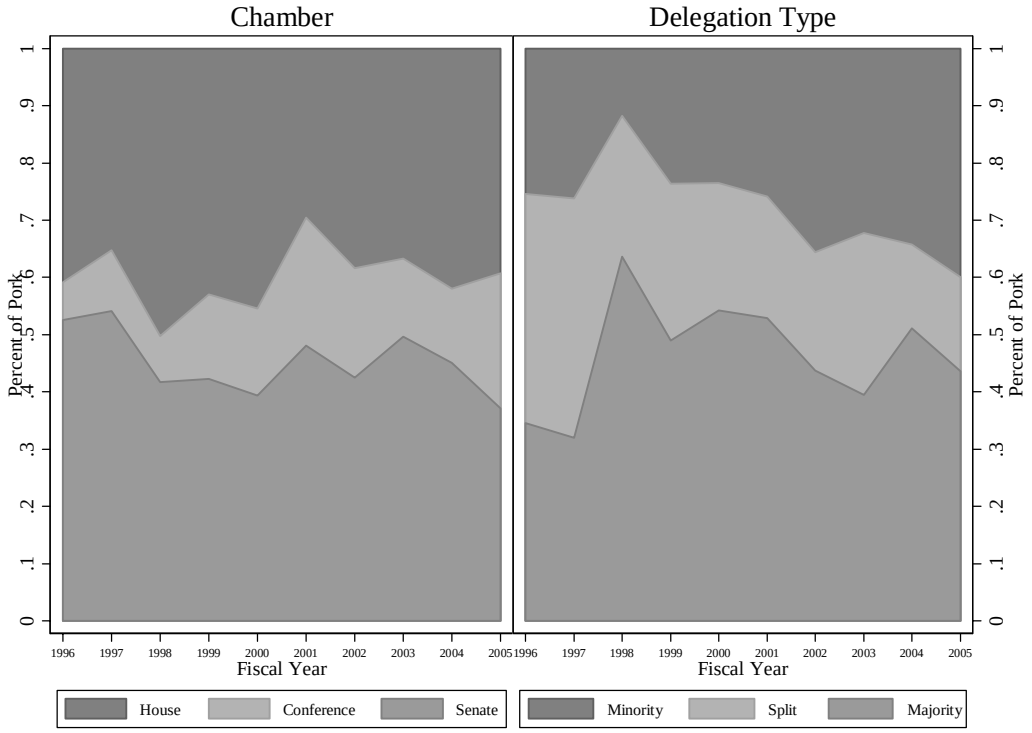

Table 1 — Fiscal Distribution of Pork Projects Among the States, 1996-2005

Variable	Senate Projects	All Projects	Projects Added in Conference
Majority Delegation	1496.7* (708.82)	2842.68* (955.55)	416.19 (334.66)
Split Delegation	-478.64 (577.91)	-550.01 (841.19)	-52.58 (275.51)
Appropriations Chair	15751.59* (3953.54)	20072.1* (4761.07)	3361.54* (1164.89)
Appropriations Ranking Member	6208.73* (3064.75)	11996.58* (3643.11)	2866.50* (762.30)
Appropriations Subc. Chair	4983.32* (845.12)	7326.81* (1032.10)	1104.11* (274.54)
Appropriations Subc. Ranking Member	3573.23* (630.05)	6763.81* (883.22)	1406.22* (298.51)
Senate Party Leader	4447.62* (2407.68)	5707.83* (2532.52)	650.01* (272.85)
Up for Reelection	-492.57 (748.90)	-574.93 (900.48)	-216.44 (246.35)
Up for Reelection (Majority)	-1204.66 (812.13)	-1258.05 (1077.70)	-5.80 (337.95)
Majority Size	1325.20* (459.02)	5395.08* (795.27)	740.70* (154.13)
State Population	5.18e-05 (.000058)	.001181* (.000107)	.00029* (.00004)
House Pork Projects	-0.058 (0.076)	—	—
House Appropriations Chair	—	6844.48* (2073.40)	2482.22* (860.88)
House Appropriations Ranking Member	—	-7966.15* (1331.78)	-1233.25* (480.25)
House Appropriations Subc. Chair	—	-220.50 (968.60)	107.81 (308.31)
House Appropriations Subc. Ranking Mbr.	—	-2256.89* (1146.48)	-139.26 (384.94)
House Party Leader	—	-1341.00 (1544.91)	44.39 (521.03)
Constant	-71861.01* (24635.07)	-293572.7* (42631.76)	-41509.56* (8397.35)
N	500	500	500
R^2	0.327	0.613	0.670
F-statistic	11.71*	39.01*	22.17*

* $p<0.05$, one-tailed. Year fixed effects not reported. Estimates are OLS coefficients, with robust standard errors in parentheses. Dependent variable is dollars awarded (in $10,000s).

Table 2 — Electoral Effects of Pork Per Capita in U.S. Senate Elections, 1996-2004

Variable	Model 1
Pork Per Capita (in $10,000s)	116.29*
	(53.853)
Previous Vote Share	.127*
	(.063)
State Partisanship	.218*
	(.069)
Challenger Quality	-3.079*
	(1.175)
Spending Differential	-2.808*
	(.400)
State Population	$9.25e^{-08}$
	($9.52e^{-08}$)
Freshman	-.745
	(1.132)
Midterm	.854
	(1.419)
Constant	37.048*
	(5.687)
N	120
R^2	.683
F-statistic	19.56*

* $p<0.05$, one-tailed. Year fixed effects not reported. Estimates are OLS coefficients, with robust standard errors in parentheses. Dependent variable is incumbent vote share.