

# Earmarks as a Means *and* an End: The Link between Earmarks and Campaign Contributions in the U.S. House of Representatives

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*Legislative earmarks have taken center stage in the popular press in recent years as journalists, pundits, the president, and, sometimes, even legislators themselves question the economic, representational, and general policy implications of this type of federal spending. Some scholars suggest that legislators garner either direct or indirect electoral benefits from this behavior, but empirical findings are mixed. In this article, we place this discussion in the context of the literature on the link between campaign contributions and legislative services. We argue that MCs use earmarks to reward loyal contributors while interest groups attract earmarks by contributing to legislators' campaigns. Utilizing a two-stage OLS technique, we find a robust relationship between defense earmarks and campaign contributions from defense political action committees during the 111<sup>th</sup> Congress.*

Legislative earmarks have taken center stage in the popular press in recent years as journalists, pundits, the president, and, sometimes, even legislators themselves question the economic, representational, and general policy implications of this type of federal spending (e.g., Baker and Herszenhorn 2009; Lightblau 2010).<sup>1</sup> With one notable recent exception (Frisch and Kelley 2010), the vast majority of the work has been critical of the congressional earmark. Among the most pejorative critiques comes from the Center for Responsive Politics (CRP) who, in partnership with Taxpayers for Common Sense (TCS), provide data-linking campaign contributions and earmarks, implying that federal distributive funding is available for purchase by interested buyers.<sup>2</sup> While provocative, they do not actually test for a relationship. Nor do they provide theoretical justification for such a link or account for certain empirical realities. For instance, the earmark-contribution relationship need not be quid pro quo for there to be a correlation; doing both simultaneously makes electoral sense particularly if there are clear district interests.

Furthermore, CRP's research implies that campaign contributions buy earmarks when it is just as likely that the causal arrow also runs the opposite direction, from earmarks to contributions.

The goal of this article is to determine whether a link indeed exists between campaign contributions and congressional earmarks. To date, much of the research on earmarks by congressional scholars speaks to how they relate to the electorate (e.g., Bickers and Stein 1996; Lazarus 2009, 2010; Levitt and Snyder 1995; Mayhew 1974; Sellers 1997; Stein and Bickers 1997). We argue in this article that voters are not the only—and may not even be the *primary*—target for legislative earmarks. Rather, MCs target a more attentive group, namely interest groups, when distributing these goods. By distributing earmarks and then claiming credit for their delivery, MCs seek to accomplish their immediate goal of receiving campaign contributions from affected groups so that they may accomplish their long-term goal of reelection. But this is a two-way street. Interest groups, we argue, try to accomplish their policy goals by attracting

<sup>1</sup>An online appendix with supplementary material is available at <http://journals.cambridge.org/jop>. Data and material to reproduce the results is available at <http://www.unm.edu/~msrocca/Writings.html>.

<sup>2</sup>See <http://www.opensecrets.org/earmarks/> (July 17, 2012).

earmarks from MCs by distributing campaign contributions. It is rational to do so because unlike other legislative services they attempt to buy, earmarks are themselves a policy outcome. We specifically account for this endogeneity by employing a two-stage ordinary least squares (OLS) analysis. This technique is frequently used to deal with what is a common problem in any study of the relationship between campaign contributions and legislative behavior.

Utilizing two-stage OLS, we find a robust relationship between defense earmarks and campaign contributions from defense political action committees during the 111<sup>th</sup> Congress. This finding has at least two important implications, the latter of which reaches well beyond research on the U.S. Congress. First, it represents the first evidence showing a direct link between campaign contributions and actual policy. To date, research on money and the legislative process investigates only the *means* of the policy process: votes, bills, access, and committee participation. In contrast, our findings show a robust and direct relationship between money and a policy *end*, in the form of distributive policy. The second implication of our research is more normative and relates to the nature of representation. Our findings suggest that members of Congress receive a considerable wage for the earmarks they distribute providing further evidence that representation is skewed towards those with resources. Like in a system of patronage, individual legislators and interest groups are rewarding one another by trading in divisible goods. This is a troubling conclusion if we are to accept, among other things, that a democracy is one in which its members are politically equal in determining policy (Dahl 1998).

### **Legislators' Perspective: Earmarks as a Means to an End**

In 1964, Lowi defined distributive policy as policy that allocates resources to a relatively small, specific set of individuals or groups and disperses the costs across society as a whole. Weingast (1994) specified these policies as omnibus, expenditure policies, made up of "local projects that can be varied in size, scope, and dollar amount independently from one another" (321). These can include formula-based allocations of resources to particular projects, states, or programs, and discretion for how these funds are allocated can be held by legislative committees or bureaucratic agencies (Stein and Bickers 1997). They also include discretionary federal grants that are allocated (usually by bureaucrats) on a case-by-case basis in response to

grant proposals (Lowry and Potoski 2004). Much recent research has focused on why legislators participate in distributive policymaking and how such policies are geographically distributed. The explicit assumption is that legislators participate in this type of policy because it helps them achieve the goals attributed to them by Mayhew, especially the reelection goal.

The logic is simple. Of the three types of policy defined by Lowi (1972)—regulatory, redistributive, and distributive—the latter is best used for credit claiming and constituent service because it is the only type of policy that can be directed to specific districts, states and even nongeographic constituencies. Distributive policy is attractive because legislators may gain electoral benefits from grateful voters who are recipients of the allocated resources (e.g., Collie 1988; Stein and Bickers 1997). However, evidence of the direct electoral impact of distributive policy is mixed, mostly because it implies that voters are able to make some fairly complicated calculations (e.g., Bickers and Stein 1996; Levitt and Snyder 1995; Sellers 1997; Stein and Bickers 1997). Constituents must be aware of the benefits they have received and give credit to their representative for those benefits. These calculations require that voters have information at their disposal about particular policies that lead to a project in their district or city and that they understand their legislator's role in the process leading to that policy's successful passage (Samuels 2002). As Samuels (2002) suggests, distributive policy may not be a wildly successful tool for credit claiming because the recipients of those actions—the voters—have little incentive to pay attention to such behavior or reward it if they are aware of it.

However unlikely this voter behavior is, some research has shown that distributive policy can increase a legislator's likelihood of reelection, perhaps because its effects on electoral outcomes may be conditional (Stein and Bickers 1997) or indirect (Samuels 2002). Furthermore, Lee (2003) argues that not all distributive policy creates the same opportunity for electoral credit claiming and that much of the contradictory evidence to date is due to our failure to separate its various types (see also Lowry and Potoski 2004). She argues that each of the three types of distributive policy has its own unique set of predictors.

The first is formula-based distributive policy, which places funds more directly in pockets of voters (Lowry and Potoski 2004). Credit claiming is difficult in these circumstances because while the legislator may have pushed hard for a formula that increased the allocation to his state, explaining to voters the

intricacies of that process and the MC's role in it is virtually impossible. The second type of distributive policy, discretionary grants-in-aid, creates its own set of problems for direct electoral gains (Lee 2003; Lowry and Potoski 2004). These grants are generally given to relatively small subgroups within a geographic district and voters are unlikely to be aware of how (or whether) these moneys are being allocated to their district and what the impact of those grants are, making a direct electoral impact less likely. Complicating this process even more, they are usually allocated by bureaucrats, not politicians themselves, so the connection between the funds and the source of those funds becomes muddled.

The third type is the congressional earmark. Unlike the previous two types of policy identified by Lee, earmarks have characteristics that may make them uniquely suited for reelection purposes (Frisch 1998). Earmarks "consist of a detailed specification of how Congress intends for appropriated funds to be spent within an individual state, typically on a discrete distributive project" (Evans 2004, 164). This specification may occur in the language of a bill or may be contained in the committee report. In other words, earmarks are distributive policies that specify exactly which projects will be funded instead of creating formulas for allocating those resources or relying on a competitive grant process. Because earmarks are given for individual—often geographically contained—projects, not as grants to states, an MC can take personal responsibility for the projects that occur and will not have to vie with other legislators in his state for credit (Lee 2003). Lazarus echoes this argument by finding that the distribution of earmarks correlates with local demand for spending. He writes,

... even though members may be castigated at a national level for excessive earmarking, at the local level they may be celebrated for propping up the research activity of the local university or securing an upgrade to the aging housing at the local military base (2010, 351).

Still, the empirical evidence of any direct electoral impact is inconsistent.<sup>3</sup> Again, this is likely due to the unrealistic expectations regarding constituent incentives and their capacity to collect the requisite information and make appropriate judgments. It is

<sup>3</sup>Lazarus (2009) finds electoral vulnerability to be a significant determinant of the allocation of distributive benefits in Congress (but only for majority party members). Clearly, members of Congress believe in the positive electoral potential of distributive spending. So despite mixed results on the subject, legislators behave *as if* localized benefits matter to their reelection.

possible, however, that voters may not be the only—or even the primary—audience for MCs' credit claiming for earmarks. Strong incentives exist for MCs to deliver particularistic goods that benefit more attentive and resource-rich groups than just voters. In Mayhew's words, "it would not be surprising to find that benefits go where the resources are" (1974, 57). In fact, according to Mayhew, the geographic boundaries of a representative's district need not constrain this transaction because "campaign contributions flow into districts from the outside" (57). Mayhew seems to suggest that a connection exists between contributions and congressional earmarks.

The purpose of this article is to determine whether such a link indeed exists. There is strong theoretical justification to believe so. In summary, our logic is as follows. Members of Congress are interested in winning reelection and need resources to do so. One of the most important resources is money, which has been shown to not only be an important determinant of congressional election outcomes (Jacobson 1978, 1980, 1985, 1990) but a key source of the incumbency advantage (Abramowitz 1991; Abramowitz, Alexander, and Gunning 2006). Among the tools MCs have to attract campaign contributions from groups—political action committees in particular—are congressional earmarks. Earmarks are a unique form of distributive policy because individual legislators can credibly claim responsibility for their delivery. From the legislator's perspective, then, earmarks are a means to an end. More specifically, they are used to attract the campaign contributions necessary to their reelection.

### Interest Groups' Perspective: Earmarks as a Policy End

In recent years, approximately 40% of campaign contributions in the House of Representatives came from political action committees (PACs).<sup>4</sup> In the 2010 midterm election, the average winning House incumbent received \$560,000 from PACs. This represents over half of what the average MC spent during the election cycle. What do PACs receive in return for their money? We assume that PACs are rational and therefore *do* expect something in return for their contributions. Chief among those benefits, of course, is the prospect of keeping an ally in office. But

<sup>4</sup>See <http://www.opensecrets.org/bigpicture/wherefrom.php?cycle=2008> (July 17, 2012).

research shows there to be other benefits as well, especially in the form of particular legislative activity. For example, though they do not directly measure legislative activity, Denzau and Munger (1986) provide explicit theoretical links between PAC contributions and legislative services. Simply stated, PACs are in the business of buying MCs' time and will contribute to MCs most likely to offer their services at a low cost.

In a similar vein, Hall and Wayman (1990) find a strong relationship between contributions from PACs and the vigor with which MCs participate on behalf of donors' issues. This benefits PACs because contributions may induce MCs to get actively involved in ways that affect the of shape committee legislation (e.g., authoring or blocking a legislative vehicle, negotiating compromises behind the scenes, offering friendly amendments, and so on). The goal, as Hall and Wayman put it, "is not simply to purchase support but to provide incentives for supporters to act as agents" on behalf of the principal which, in this case, is the PAC (1990, 802).

PACs might expect other types of legislative services in return for their campaign contributions. Among the most important is access, which may be a precondition for having influence over policy (Sabato 1984). A long line of research finds that groups achieve access through campaign contributions from PACs (e.g., Austen-Smith 1995; Gopoian 1984; Hojnacki and Kimball 2001; Wright 1990). In addition to gaining access, PACs may also receive specific bills in return for contributions. For example, Rocca and Gordon (2010) find a robust relationship between PAC contributions and bill sponsorship. And while it is unlikely that PAC contributions directly and independently affect the likelihood a bill becomes law, PACs are shown to invest in the most effective legislators (Box-Steffensmeier and Grant 1999).<sup>5</sup>

These findings share a few important characteristics. First, the influence of PAC contributions appears to strongly influence how a MC spends her time. This is an important point because, as Fenno notes, time is a House member's "scarcest and most precious political resource" (1978, 34). Furthermore, Bauer, De Sola Pool, and Dexter call a member's principal problem not how to vote, "but what do with their time, how to allocate his resources, and where to put

his energy" (1963, 405). In the end, buying legislative activity and services equates to buying an MC's most important resource, their time.

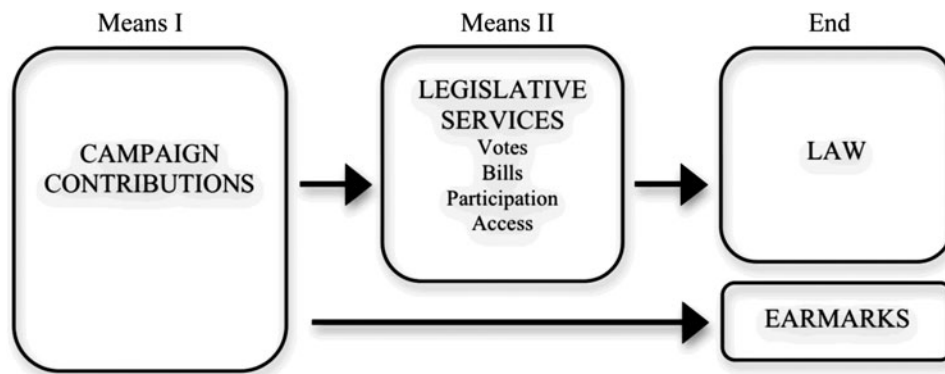
Second, each of the legislative services noted above—committee participation, access and bills—are tangible. Thus PACs receive something specific and identifiable for their contributions. Still, as depicted in Figure 1, they are primarily a means to an end with the end being *policy output*. It is possible for interest groups to consider these services (i.e. votes, bills/amendments, participation, and access) an end in themselves. For example, a rational PAC—one that is interested in maintaining its own organization—may use these legislative services as evidence that they are effectively representing their own members. But the more likely scenario is one where the interest groups treat votes, bill sponsorship, participation, and access as the mechanisms for accomplishing their overall goal: influencing and, then, *passing* policies in their interest.

There is one legislative service, however, that can be characterized as not just a means to an end but the end itself: earmarks. Like other legislative services, earmarks are a tangible and identifiable good. Unlike other services, earmarks are policy outputs (see Figure 1). Furthermore, they are delivered more or less by individual members of Congress. Contrast this to a MC's decision to sponsor a bill, for instance. This is just the first of a highly complicated series of steps required to make national policy and the success of that policy is dependent on the actions of multiple actors. Earmarks, on the other hand, are policy outputs driven mostly by individual MCs. While earmarks are likely to be a very small part of an omnibus-spending bill, they can be easily traced to individual members of Congress since individual legislators in fact request all funded projects. Indeed, this is what makes earmarks such useful tools for credit claiming (Mayhew 1974; see also Lazarus 2009, 2010; Lazarus and Steigerwalt 2009).

The second half of our argument, in short, is this: incumbents want to remain in office and need money to do so. PACs want to give money to those who can deliver tangible benefits. Distributing earmarks is the best way for incumbents to attract the money they need to win reelection and for the groups PACs represent to receive tangible, direct, and immediate rewards for their contributions. We therefore hypothesize a direct and positive relationship between the earmarks a group receives from an MC and the amount of money a PAC contributes to her campaign. That is, as the amount of money allocated in earmarks to a PAC's aligned group increases,

<sup>5</sup>One legislative service PACs do *not* appear to receive in return for contributions is roll-call votes. For the most part, recent research on the subject rules out an independent relationship between campaign contributions and roll-call voting (e.g., Wawro 2001; Wright 1985).

FIGURE 1 Interest Group's Perspective: Earmarks as a Policy End



contributions from that PAC to the relevant MC will increase (all else constant).

## Data and Methods

The goal of our analysis is to determine whether a relationship exists between campaign contributions and earmarks. Our unit of analysis is the individual legislator. The dependent variable is the amount of money an individual legislator received from defense PACs during the 2010 election cycle. The data were collected from the Center for Responsive Politics via their website [www.opensecrets.org](http://www.opensecrets.org) and are measured in dollars.<sup>6</sup> The unit of analysis is the individual members of the 111<sup>th</sup> Congress (2009–10). Since PACs generally do not contribute to retiring legislators, nor do retiring MCs typically seek contributions, we only include the 390 MCs who sought reelection in 2010. The independent variable used to test our central hypothesis is the total amount of defense earmarks a legislator received. This variable was obtained from the earmarks database collected by Taxpayers for Common Sense and was downloaded from their website at [www.taxpayer.net](http://www.taxpayer.net) and is measured in dollars.

<sup>6</sup>We use the raw contributions data here with robust standard errors. Normally, skewed data are transformed using a log function. However, when the log is taken of our dependent variable, it results in a distribution that is clearly nonnormal and results in extreme predicted values. A square root of the dependent variable creates a more normal distribution, but generates results that are not as intuitive as those produced by the raw data. Because our conclusions remain consistent regardless of the data used (raw, logged or square root), we use the raw data here for ease of interpretation. Histograms of the different distributions (Figures A1–A6) are available in an online appendix, which also depicts a table presenting the results from all three analyses (Table A-1).

We study defense because it represents a huge percentage of all earmarks distributed by Congress. Indeed, the industry received 60% of all earmark dollars from the 111<sup>th</sup> Congress. Table 1 shows that when military construction and defense are totaled, Congress sent the industry over \$46 billion compared to \$31 billion to all other industries. Military construction received more than twice the largest nondefense related earmark, energy and water (\$26,738,623,000 vs. \$12,923,830,247). Also, out of the top 20 earmark recipients with political action committees (PACs) in fiscal year 2010, 19 were defense related. For instance, according to Table 2, through their PAC, BAE Systems USA PAC, BAE Systems contributed over \$1 million dollars to individual candidates and PACs (and spent \$5.3 million on lobbying) and received close to \$40 million in earmarks, more than any other group with PACs that year. All of the federal money spent within BAE Systems was defense related, with a vast majority going to weapons systems.<sup>7</sup>

Finally, of the top 20 earmark recipients that lobbied in fiscal year 2010, *all 20* were related to the defense industry (see Table A-3 in the online appendix). The most surprising trend was the number of universities on the list. *Prima facie*, the various universities on the list did not strike us as dealing with defense. But a closer look revealed that in every case but one, more than half of the universities' earmarks were defense related.<sup>8</sup> Even the City and County of San Francisco received defense earmarks: \$9 million for remediation of Hunters Point Naval Shipyard and another \$3 million for remediation and disposal at "dry dock #1" (which is located at one of the oldest

<sup>7</sup>See Table A-2 in the online appendix to see how BAE Systems allocated their earmark money.

<sup>8</sup>The exception was University of Alabama, who received only \$1 million of its \$47.2 million for defense related projects.

TABLE 1 Earmarks by Bill, 111<sup>th</sup> Congress

Bill	2009		2010		2009-2010	
	# of Earmarks	Total Spent	# of Earmarks	Total Spent	# of Earmarks	Total Spent
Military construction	903	\$14,525,234,000	578	\$12,213,389,000	1481	\$26,738,623,000
Defense	1781	\$9,597,507,200	2058	\$7,966,191,000	3839	\$17,563,698,200
Energy & Water	2444	\$6,386,130,384	2423	\$6,537,699,863	4867	\$12,923,830,247
Transportation and Housing & Urban Development	1651	\$3,393,768,502	1872	\$3,262,043,090	3523	\$6,655,811,592
Defense supplemental	—	—	16	\$1,840,302,000	16	\$1,840,302,000
Disaster aid	—	—	6	\$1,682,000,000	6	\$1,682,000,000
Commerce, Justice & Science	1565	\$1,186,393,000	1573	\$1,219,783,420	3138	\$2,406,176,420
Financial services	293	\$65,000,000	281	\$1,165,460,300	574	\$1,230,460,300
Interior	737	\$710,444,040	608	\$974,482,000	1345	\$1,684,926,040
Labor-HHS-Education	1791	\$1,045,983,010	2155	\$973,065,800	3946	\$2,019,048,810
Homeland Security	193	\$429,281,564	151	\$780,658,728	344	\$1,209,940,292
Ag-rural development-FDA	497	\$474,872,000	538	\$478,527,900	1035	\$953,399,900
State-Foreign Ops	—	—	31	\$153,068,000	31	\$153,068,000
Legislative branch	1	\$200,000	4	\$810,000	5	\$1,010,000
TOTAL (DEFENSE) <sup>a</sup>	2,684	\$24,122,741,200	2,652	\$22,019,882,000	5,336	\$46,142,623,200
TOTAL (ALL)	11856	\$37,814,813,700	12294	\$39,247,481,101	24150	\$77,062,294,801

Note: <sup>a</sup>The total defense category is the sum of the following categories: military construction, defense, and defense supplemental.

Source: The data displayed is a joint effort of the Center for Responsive Politics and Taxpayers for Common Sense. Available at [www.opensecrets.org](http://www.opensecrets.org).

**TABLE 2 Congressional Earmarks, Fiscal Year 2010: Top 20 Recipients with PACs<sup>a</sup>**

Recipient	Total Earmarks	Indivs	PACs	Lobbying
BAE Systems	\$39,640,000	\$140,212	\$846,500	\$5,360,000
Northrop Grumman	\$34,660,000	\$408,370	\$1,260,150	\$15,180,000
Boeing Co	\$29,900,000	\$501,756	\$2,312,500	\$16,850,000
Alliant Techsystems	\$29,200,000	\$19,500	\$292,587	\$2,020,000
General Atomics	\$26,940,000	\$85,790	\$379,860	\$2,720,000
Raytheon Co	\$23,840,000	\$192,503	\$1,919,500	\$7,350,000
Lockheed Martin	\$17,900,000	\$414,429	\$2,254,250	\$13,733,782
ManTech International	\$16,800,000	\$75,649	\$143,400	\$120,000
L-3 Communications	\$15,840,000	\$76,504	\$440,300	\$5,493,000
Honeywell International	\$14,000,000	\$67,135	\$3,797,200	\$7,092,000
<i>National Rural Water Assn</i>	\$13,000,000	\$5,300	\$105,000	\$679,916
SAIC Inc	\$12,500,000	\$243,200	\$734,500	\$3,810,000
Latrobe Specialty Steel	\$10,000,000	\$3,250	\$6,544	\$0
Rockwell Collins Inc	\$9,920,000	\$24,350	\$124,000	\$740,138
Hawker Beechcraft Corp	\$8,960,000	\$6,800	\$70,750	\$250,000
Argon ST	\$8,800,000	\$38,125	\$0	\$155,000
Alion Science & Technology	\$8,100,000	\$25,495	\$85,900	\$610,000
General Dynamics	\$7,600,000	\$230,748	\$1,289,900	\$10,285,258
DRS Technologies	\$7,520,000	\$67,802	\$512,300	\$2,860,000
FLIR Systems	\$6,400,000	\$8,500	\$47,500	\$620,000

Note: <sup>a</sup>Italicized groups denote nondefense-oriented recipients.

Source: The data displayed is a joint effort of the Center for Responsive Politics and Taxpayers for Common Sense. Available at [www.opensecrets.org](http://www.opensecrets.org).

shipyards in the country). For all of these reasons—i.e., its share of total earmarks, as well as the prominence of defense recipients who have PACs and who lobby—the defense industry seems a logical choice to examine the relationship between earmarks and campaign contributions. The overwhelming prominence of the defense industry in the earmark universe makes it an interesting subject of study in its own right. It may also decrease the need to generalize to other industries (although we encourage future research to do so).

Since our theory accounts specifically for the likelihood that MCs who received money from defense PACs are more likely to request earmarks for related groups, our analytic technique must deal with this endogeneity problem. This is not an uncommon problem in any study of the relationship between campaign contributions and legislative behavior. In order to remain consistent with the large majority of past research, we use an instrumental variable for defense earmarks to account for this endogeneity issue. The first equation predicts the total amount of earmarks a legislator is likely to receive and at least one variable that affects receipt of earmarks, but not level of campaign contributions,

must be included. This is a difficult task, since both variables are similarly related to the strongest determinants of congressional behavior, such as institutional (e.g., committee membership) and electoral (e.g., district interests) characteristics. We use the square root of the total amount of earmarks (in dollars) an MC received to fully specify the first-stage earmarks model and meet the identification requirements (this measure was collected from the Taxpayers for Common Sense database). We take this measure as a proxy of representatives' general level of earmarking. It is reasonable to expect that the more active an earmarker a representative is generally, the more likely she should be to receive defense earmarks. It is much less likely that general earmark activity directly and independently relates to defense contributions, but rather affects defense contributions *through* defense earmarking.<sup>9</sup> We use OLS regression

<sup>9</sup>When included in the model explaining defense contributions without a control for defense earmarks (\$), total amount of earmarks (\$) is statistically significant ( $p < .05$ ) and positive. When we control for defense earmarks (\$), the effect of total amount of earmarks disappears. This supports our expectation that total earmarks are not independently related to defense donations.

**TABLE 3 First-Stage OLS Results, Predicting Earmarks**

Variables	Coefficient (in millions) (Std. Error)
Major military base in district	2.05 (2.88)
Military personnel as percent of district	70.10 (93.50)
Veterans as percent of district	1.09* (.47)
Appropriations Committee member	4.39 (3.42)
Defense Subcommittee member (Appropriations)	37.60* (5.28)
Military Construction Subcommittee member (Appropriations)	14.50* (7.25)
Armed Services Committee member	5.81* (3.18)
Party (Dem = 1)	7.00 (7.09)
District partisanship	.11* (.06)
Ideology	13.70* (8.03)
Length of tenure (logged)	4.21* (1.15)
Total Earmarks Received by MC, in Dollars	.01* (.001)
Constant	-33.50* (8.11)
Number of observations	390
F	38.90
Probability of F	.001
Adj. R-square	.55

Note: \*  $p < .05$ ; one-tailed tests of significance.

in both stages of the analysis.<sup>10</sup> The results of the first-stage equation are presented in Table 3.

**Control Variables.** Numerous variables influence defense PAC contributions, and we include them here as well. We begin with a legislator's underlying policy

preferences. First, a member's ideology is one measure of her policy predispositions on defense issues and has been found to affect defense contributions (Fleisher 1993). If ideology does measure policy preferences, then we should expect it to predict earmarks as well. We measure ideology using DW-NOMINATE scores in both the earmark and contributions models. The DW-NOMINATE score ranges from  $-1$ , most liberal, to  $1$ , most conservative.

We also control for each MC's political party affiliation. This variable takes on the value of one if the MC is a Democrat and zero if he is a Republican. We expect it to be positively related to campaign contributions and earmarks. There is a theoretical question, however, whether this variable measures majority-party status or political party or both. Cox and Magar (1999) note that legislators in the majority party are more useful to interest groups because they have more power and opportunity to get things done for their supporters. So, to the extent that the Democrats were the majority party during the 111<sup>th</sup> Congress, we would expect this relationship to be positive. On the other hand, if the Republican issue agenda is more consistent with the interests of defense PACs, we might expect the effect to be negative (Grier and Munger 1993). These two potentially countervailing pressures make the impact of this variable hard to predict (Grier and Munger 1993).

Interest groups also tend to contribute larger sums to those legislators who have more control over their respective policy agendas. Gopoian (1984) and Fleisher (1993) find that committee assignment is a significant predictor of defense contributions because a very small number of committees tend to address the policy issues affecting these PACs. This makes members of those committees important gatekeepers of defense policy. We code as one (zero otherwise) MCs serving on, respectively, the Armed Services Committee, Appropriations Committee, Defense Subcommittee (Appropriations), and Military Construction, Veterans Affairs and Related Agencies Subcommittee (Appropriations). Others find seniority, another measure of legislative power, to have a significant effect on campaign contributions in some circumstances (Denzau and Munger 1986; Grier and Munger 1991, 1993). We use length of tenure in years (logged) (Snyder 1992) in both stages of the model as our measure of seniority.

Gopoian's (1984) and Fleisher's (1993) findings suggest that defense contributions are strongly related to district characteristics as well, but they use home district and amount of defense contracts as measures of constituent interest, respectively. In order to control

<sup>10</sup>Our challenge was to find a balance between the most appropriate and most intuitive modeling techniques. One option was a two-stage Heckit, but it was far from the most intuitive as each stage would itself be a two-stage model. A two-stage Tobit is more intuitive but may be less appropriate (Sigelman and Zeng 1999). In the end, we decided on an appropriate modeling technique that provides the most intuitive results: two-stage OLS. Our choice is buttressed by the fact that no matter what technique we use—and whether we transform the data or not—our most important findings do not change, as shown in Table A-1 in the online appendix. Our key results are always significant, interesting and robust.



for district interests, we use four variables: percent of the district comprised of veterans, percent of the district in the military, a dummy variable that measures whether there is a major military base in the district and district partisanship, measured as Senator Barack Obama's margin of victory (or defeat) in a district during the 2008 presidential election. We expect the first three defense-oriented variables to be positively related to campaign contributions and earmark receipts and the district partisanship to be negatively related.

Finally, we include the amount of money an MC received from all nondefense groups as a measure of how aggressively a candidate seeks contributions (e.g., see Romer and Snyder 1994; Saltzman 1987). This variable is logged to deal with the skewed nature of the data.

## Results

Table 4 depicts the second-stage OLS results for defense contributions during the 2010 Congressional election cycle. The findings demonstrate a strong relationship between earmarks and campaign contributions from defense groups. *Defense earmarks* is statistically significant at the .01 level and in the predicted direction. The results show that after controlling for institutional and district factors, an MC secures more campaign contributions for every one dollar she delivers in defense earmarks. This is strong evidence that the value of earmarks—and distributive benefits more generally—extends beyond the indirect electoral value claimed by Stein and Bickers (1997) and others. Our findings demonstrate it has significant credit-claiming value and is rewarded by affected groups in the form of campaign contributions.

Furthermore, this relationship is significant even when controlling for other factors found to have influenced contributions. Table 4 shows that individual-level factors affect defense contributions. *Ideology* is significant and in the predicted direction, as defense groups tend to contribute more to conservatives than liberals. Committee membership also results in additional contributions; members of the *Appropriations Committee* and *Armed Services Committee* receive more money from defense groups than nonmembers. *Defense Subcommittee* membership is significant at the .10 level. *Tenure* also affects donations from defense groups. *Party* is not related to defense contributions at the .05 level. This may be due to the counterbalancing effects of majority party and party platforms. While

TABLE 4 Second-Stage OLS Results Predicting Contributions (Robust Standard Errors)

Variables	Raw dollars Coefficient (Std. Error)
Amount of defense earmarks received	.0003* (.0001)
Major military base in district	1,210.08 (3727.35)
Military personnel as percent of district	303,670.00* (170,092.00)
Veterans as percent of district	-185.32 (608.20)
Appropriations Committee member	17,288.40* (3,594.14)
Defense Subcommittee member (Appropriations)	11,589.36** (8,697.90)
Military Construction Subcommittee member (Appropriations)	2,451.32 (11,393.60)
Armed Services Committee member	43,934.85* (6,198.19)
Total nondefense contributions received	7.19* (3.02)
Party (Dem = 1)	11,994.94** (8,699.17)
District partisanship	70.04 (84.36)
Ideology	20,078.45* (8,913.91)
Length of tenure (logged)	4,114.19* (1,869.75)
Constant	-12,639.83** (9,619.36)
Number of observations	390
F	16.21
Probability of F	.001
Adj. R-Square	.50

Note: \* < .05, \*\* < .10; one-tailed tests of significance.

Democrats were the majority in the 111<sup>th</sup> Congress, Republican Party positions are more consistent with the interests of defense-related contributors. However, *party* is significant at a more relaxed .10 significance level and, as we discuss below, is not only in the predicted direction but has a substantively interesting effect.

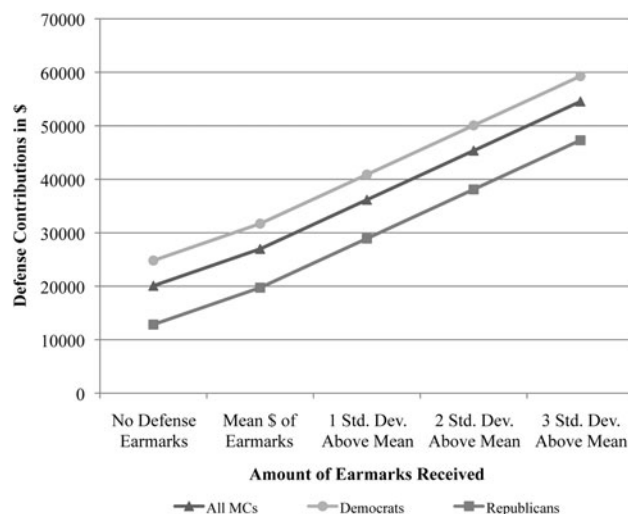
The results for the district-oriented control variables are mixed. Three of the four district-level variables are insignificant predictors of contributions at the .05 level—*major military base*, *veterans in a district*, and *district partisanship*. *Military personnel* as a percentage of voters in the district is significant at the .05 level. The insignificance of *major military*

base and veterans in a district is likely due to their collinearity with committee membership and the military personnel variable. The amount of *nondefense contributions* an MC receives is positively related to how much she receives from defense ( $p < .05$ ).

Perhaps most importantly for our purposes, the impact of earmarks on contributions appears to be substantively important. We used Clarify to determine the substantive impact on contributions across various levels of earmarks. The results are presented in Figure 2.

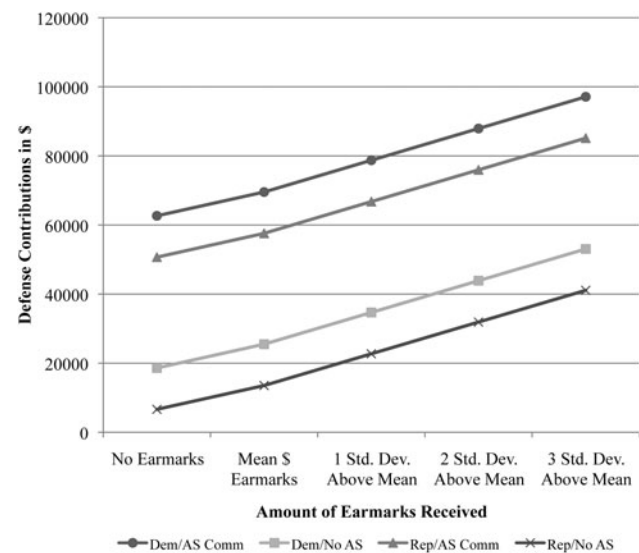
Figure 2 shows that as the amount of earmarks increases, the amount of money received from defense PACs increases as well. MCs who provide no defense earmarks receive approximately \$20,000 in defense contributions while those who are able to garner \$22 million in earmarks (the mean for all legislators) receive 35% more (\$27,000). Those who provide 1 standard deviation above the mean in earmarks, or \$50 million, receive around \$36,000 in contributions—a substantively important increase. At first glance, these effects may not seem like much. But consider this: \$27,000 in defense contributions to an individual MC is roughly .2% of the total amount of contributions defense spent in the 2010 electoral cycle (\$14 million). And the \$22 million in earmarks the MC delivered in return (or vice versa) is roughly .1% of the total amount in earmarks Congress sent to the defense industry in the 111<sup>th</sup> Congress (\$46 billion). Simply stated, \$27,000 in a MC's receipts is to Congress' total receipts approximately as \$22 million in individually allocated earmarks is to total

FIGURE 2 Earmarks and Campaign Contributions



Note: Mean Earmarks: \$22 million 1 SD: \$50 million 2 SD: \$79 million 3 SD: \$108 million

FIGURE 3 Earmarks and Campaign Contributions by MC Party and Armed Services Committee Membership



Note: Mean Earmarks: \$22 million 1 SD: \$50 million 2 SD: \$79 million 3 SD: \$108 million

congressional earmarks. The same goes for \$36,000 in defense contributions (.3% of total defense contributions) and \$50 million in returned defense earmarks (.1% of total defense earmarks). Thus, in relative terms, there is almost a one-to-one relationship between contributions received and earmarks allocated (or, conversely, contributions allocated and earmarks received). This suggests a substantively important relationship.

It appears that whether one is a member of the majority party matters as well. It is clear from Figure 2 that at each level of earmark allocation, Democrats receive more in contributions than Republicans. However, Republicans can use earmarks to make up the differential between parties; a Republican who allocates \$50 million in earmarks gets about the same level of contributions as a Democrat who garners no defense earmarks at all.

Figure 3 illustrates the relationship between contributions and earmarks based upon party affiliation and Armed Services Committee membership. The general relationship between party and contributions remains the same as in Figure 2 as Democrats get more than Republicans at each level of earmarks, but committee members within each party receive more in contributions than their noncommittee member, partisan colleagues.<sup>11</sup>

<sup>11</sup>These relationships hold for the Appropriations Committee and Defense Subcommittees.

## Discussion and Conclusion

The goal of this project was to determine whether a relationship exists between congressional earmarks and campaign contributions. We argued that interest groups (through their PACs) contribute to MCs' campaigns to attract earmarks, a policy end. Legislators, in turn, use earmarks as a means to attract campaign contributions from potential donors. The results show a strong relationship between one policy area, defense earmarks, and contributions from defense PACs in the 111<sup>th</sup> Congress. Specifically, allocating defense related earmarks increased contributions from defense PACs. In all, the results show that earmarks can have direct political consequences, beyond just the indirect effects noted in previous research (e.g., Stein and Bickers 1997). Thus this article sheds new light on why legislators allocate earmarks in Congress. By showing a direct and robust relationship between MCs' distributive behavior and interest group contributions during the 111<sup>th</sup> Congress, it substantiates the claim that earmarks—and the credit claiming carried with it—matters.

The normative implications of this relationship are striking. First, it has representational consequences because the distribution of federal benefits is an important form of representation. Simply stated, this relationship between contributions and earmarks suggests that representation is skewed towards those with resources. Thus our findings are both consistent with and an extension of research on campaign contributions and its effect on a wide variety of congressional behavior including (but not limited to): access (e.g., Langbein 1986), legislative participation (e.g., Hall and Wayman 1990), elections (e.g., Jacobson 1980), bill sponsorship (Rocca and Gordon 2010), and lobbying (Wright 1990).

Second, in light of our findings, it is reasonable to question whether Congress is spending earmark dollars appropriately. We do not suggest that earmarks are necessarily wasteful or bad for democracy. Indeed, as Frisch and Kelly (2010) argue, earmarks serve an important role in our democracy. In particular, the process ensures that our most representative branch allocates money rather than unelected bureaucracies. One recent example of the benefits of the earmarks process relates to defense spending. When the United States went to war in Iraq in 2003, only a small percentage of Humvees were armored. In response to public outcry and the Pentagon's slow-footedness, Congress authorized spending on armor through earmarks, and the Humvees were

outfitted seven months ahead of schedule (Morrison, Vander Brook, and Eisler 2007). But while groups and lobbyists may be providing valuable services to members of Congress during the appropriation process (as noted by Frisch and Kelly), the strong link between contributions and earmarks casts a dark cloud over the integrity of the process. One must question whether these awards are distributed on account of a program's merits or the amount of money its recipients contribute to relevant MCs. It is possible, of course, that merit and money are *both* determinants of the allocation decision. We leave it to future research to investigate the effect of project merit on individual earmark requests and allocations.

The final implication relates more specifically to defense spending. The sector receives a huge portion of total earmark expenditures, especially relative to defense spending generally. In 2010, 20% of total federal spending went to defense. However, as we discuss above, defense consisted of 56% of all earmark spending in 2010 (and 65% in 2009). What explains this asymmetry? At first glance, it does not appear to be money. While our findings show earmarks to be a robust determinant of contributions at the individual level, in the aggregate the defense sector actually contributes less than every other sector.<sup>12</sup> So they receive tremendous bang for their buck; in the aggregate the sector receives about \$1.5 billion in earmarks for every \$1 million it spends in campaign contributions. At this point, we cannot be sure whether a link exists between contributions and earmarks in the aggregate. Future research should investigate how and why it is that the defense sector receives such a large proportion of earmarks and whether a link exists between contributions and earmarks in the aggregate. What we can say rather definitively is that defense-related contributions and earmarks are robustly linked at the level of the individual MC. More succinctly, members of Congress receive a considerable wage in return for the earmarks they distribute.

<sup>12</sup>Sectors (and their 2010 spending) include agribusiness (\$22.9 million), communications (\$24.9 million), construction (\$15.5 million), defense (\$14.3 million), energy/natural resources (\$28.9 million), finance/insurance and real estate (\$62.9 million), health (\$54.5 million), lawyers and lobbyists (\$15.9 million), transportation (\$21.1 million), miscellaneous business (\$37.8 million), labor (\$63.7 million), ideological/single issue (\$60.2 million), and other (\$1.3 million). See <http://www.opensecrets.org/pacs/> (April 29, 2011).

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