Political Parties and the Distribution of Federal Outlays

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Theory: Several models of distributive politics predict a role for parties in determining the allocation of federal outlays.
Hypotheses: The number of Democratic voters will be positively correlated with federal outlays, even after controlling for demographic and socioeconomic variables. The degree to which a program will be skewed to Democrats will be a function of the amount of variation in program benefits across districts, whether the program is administered by formula, and the extent of one-party control when the program is initiated.
Methods: Regression analysis of district-level data on election outcomes and federal assistance programs for the period 1984–90.
Results: The number of Democratic voters is an important predictor of the amount of federal dollars flowing to a district. Programs with a greater amount of variation across districts are more heavily skewed to Democrats, as are programs administered by formula. Programs initiated in the latter half of the 1970s, a time of solid Democratic control, exhibit the greatest bias towards Democrats; programs started in the Reagan era show no such bias. Our results are consistent with a model in which parties in the United States play an important, but limited role in determining the distribution of federal dollars: given enough time, parties can target *types* of voters, but they cannot easily target specific districts.

1. Introduction

Political parties in the United States are widely regarded as weak organizations that have been in decline for most of the post-war period. The research on Congress over the past twenty years provides ample evidence supporting this view. Inside Congress, levels of partisan roll-call voting are low, party leaders and caucuses have limited powers and resources, and the legislative process is dominated by committees and subcommittees that are insulated from party pressures by the seniority system. Electorally, congressional campaigns are highly personalized affairs in which candidates rely little on party resources and split-ticket voting is widespread.[1]

[1] The relevant literature is huge; examples are Sinclair (1978), Brady, Cooper and Hurley (1979), Brady and Bullock (1981), Crotty (1984), Wattenberg (1984), Collie and Brady (1985), Cain, Ferejohn and Fiorina (1987), and Krehbiel (1993).

Recent studies, however, have begun to challenge this view. Rohde (1991) argues that given sufficient intra-party agreement on basic issues, parties can legislate effectively. He shows that the incidence of party voting in the House of Representatives increased sharply over the period 1977–88, as the Democratic party became more cohesive, as reforms increased the powers of the Democratic Caucus and party leaders, and as the Caucus and leaders became increasingly willing to exercise their powers. Kiewiet and McCubbins (1991) and Cox and McCubbins (1993) argue that parties serve as organizing mechanisms that enable individual legislators to overcome the collective dilemmas they face. They present evidence of party influence on election outcomes, committee assignments and transfers, aggregate federal expenditure levels, and roll-call voting in the House. Ward (1993) shows that voting in congressional committees is typically more partisan than voting on the floor. Snyder (1994) shows that House and Senate roll-call voting on close divisions differs substantially from that on lopsided votes, and in precisely the manner predicted by a model of party influence. With respect to elections, Keith et al. (1992) show that party-line voting (voting consistent with party identification) in presidential and House elections increased over the 1980s, that fewer than 10% of all voters can be classified as ''pure'' independents, and that people who entered the electorate in the late 1980s were more partisan than people who entered in the late 1960s and early 1970s.

This paper provides new evidence about the importance of United States political parties. Specifically, we find evidence that parties play a significant, although not unlimited, role in determining the geographic distribution of domestic federal expenditures.

We first show that spending on federal assistance programs across congressional districts over the period 1984–90 is an increasing function of the number of Democratic voters in a district. This pattern persists even after controlling for a wide range of demographic and socioeconomic characteristics including age, income, race, and region.[2]

Dividing the sample of spending programs in various ways reveals even more interesting patterns. First, we divide programs according to whether their benefits are geographically concentrated or dispersed. Programs that target specific activities or areas, such as agricultural payments

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[2]It is not clear what constitutes the proper set of ''controls'' to include in such an analysis. For instance, a number of government programs are directed towards minorities, suggesting that race is a logical control variable. Minorities, however, also tend to disproportionately vote Democrat. Thus, from the perspective of partisan politics, earmarking funds for minorities may simply be an effective way of targeting Democratic voters, in which case it does not belong as a control variable. We discuss this further below.

and research and education grants, are arguably more manipulable than entitlement programs, such as social security and veterans' pensions, whose benefits are geographically dispersed (e.g., Arnold 1987). If parties have limited influence over the allocation of federal spending, one might expect party influence to be more pronounced for programs that are more malleable. This prediction is confirmed by the data. Outlays on programs whose benefits exhibit a large amount of variation across districts are more heavily skewed towards Democratic voters than outlays on programs whose benefits are relatively widely distributed.

Second, we divide programs according to whether or not the allocation of spending across states or localities is prescribed by a formula (either legislated or subject to administrative rule). It is likely that Congress has more control over the allocation of spending for programs with formulas than for programs where executive agencies have more discretion, such as project grants.[3] Also, partisan politics is almost certain to be a factor when determining formulas. Empirically, we find that programs with formulas are more heavily skewed towards Democratic voters than programs without formulas.

Third, we divide programs according to the year they began. For programs initiated during the period 1975–81, the relationship between spending and the number of Democratic voters is extremely strong. The enabling legislation for these programs was likely passed between 1974 and 1980, a period with large Democratic majorities in both the House and Senate, as well as a Democratic president for much of the time. In contrast, programs initiated between 1981 and 1990, a period of divided government, show no bias toward Democratic voters. Programs initiated before 1975 exhibit an intermediate degree of partisan bias. This strongly suggests that divided government and the size of congressional majorities affects the distribution of spending.

While the results above demonstrate the importance of party influence, other results illustrate its limits. First, we find no systematic effect of the party affiliation of a district's *representative* on the allocation of federal dollars. Holding the number of Democratic voters constant, the Democratic party would presumably prefer to target districts represented by Democrats, but appears unable to do so. Second, when we include district-fixed effects, so the model only captures the effect of within-district variation, we find no evidence that short-term changes in either the number of Democratic

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[3]Even when an administrative agency writes the formula, rather than Congress, the existence of a formula makes it easier for Congress to monitor the agency's spending decisions.

voters or the party affiliation of the district's representative affect the amount of federal outlays. Thus, it appears that parties are unable to rapidly reallocate the distribution of federal spending in response to changes in district circumstances.

Overall, these findings suggest that Democratic control of both the House and Senate over most of the post-war period has allowed Democrats to fashion a portfolio of spending programs that disproportionately benefit their constituents. On the other hand, the Democratic majority seems unable to target extraordinary amounts of money to specific districts, or to quickly alter the geographic distribution of expenditures. It appears that parties in the United States can, given enough time, target *types* of voters, but they cannot easily target individual districts.

The structure of the paper is as follows. Section 2 considers the predictions of various models of political parties concerning the allocation of federal dollars and reviews the existing empirical literature on the topic. Section 3 describes the data set and methodology we employ. Section 4 presents the empirical findings. Section 5 discusses the implications of our results and concludes.

2. Distributive Politics and Political Parties

There are several possible models of the role of political parties in distributive politics that yield empirically distinguishable predictions concerning the allocation of federal outlays. One model, suggested by the standard view of parties in the United States as weak organizations, is that distributive politics is decentralized, organized around individual representatives and congressional committees rather than parties. According to this view, there should be a close correspondence between the amount and type of federal expenditures in a district and the committee assignments of the district's representative. Districts whose representatives occupy committee chairs or other powerful positions might be especially favored.[4] There is

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[4] The empirical literature searching for such relationships is large (e.g., Plott 1968, Goss, 1972, Ferejohn 1974, Strom 1975, Ritt 1976, Rundquist and Griffith 1976, Rundquist 1978, Arnold 1978, Greene and Munley 1980, Johnston 1980, Ray 1980a, 1980b, 1980c, 1981, Kiel and McKenzie 1983, Wilson 1986a, Rich 1989, Anderson and Tollison 1991, Gryski 1991, Reed and Schansberg 1993). Most of the evidence supports the "recruitment" hypothesis, in which representatives are attracted to committees whose activities are important to their districts. There is far less evidence that committee membership allows representatives to increase the total amount of resources directed to their districts (Ray 1981 is an exception). The relationship between congressional seniority and federal outlays also appears to be weak. A separate literature, summarized in Stein and Bickers (1994), examines the electoral effect of district-level outlays, finding generally small effects.

no reason to expect a significant correlation between the share of a district's presidential vote going to the Democrats and federal outlays in this model.[5]

An alternative is the "strong party" model, in which parties are effectively treated as unitary actors maximizing some mix of policy and re-election goals. Under this view, the party that controls the government (assuming one exists) can target expenditures to particular programs and districts fairly quickly and precisely. Although few empirical studies claim support for the strongest versions of this model, Castles (1982), Rallings (1987), Budge and Keman (1990), and others provide evidence that parties in many European democracies have a considerable degree of control over the pattern of public expenditures. Budge and Hofferbert (1990) argue that even in the United States there is a tight link between party platforms and federal spending priorities. Under the strong party model, we should expect the majority party to direct spending to districts it controls, especially those that are politically vulnerable. When the party affiliation of a district's representative changes, a reallocation of federal outlays would quickly follow.

A third model treats parties in Congress as groups of politicians who sometimes act together to achieve collective goals, but whose cooperation is limited by their conflicting preferences (e.g., Kiewiet and McCubbins 1991, Cox and McCubbins 1993). Under this view, a party that sustains a large majority in Congress over a relatively long period may be able to fashion a portfolio of programs that disproportionately favor its constituents. If the congressional majority is too small, however, or if there is divided government, then the majority party in Congress will probably be unable to secure significantly greater benefits for its voters. Also, the time and effort required to secure intra-party bargains make it unlikely that the majority party will be able to direct resources to particular districts or sets of districts, or rapidly rearrange the distribution of federal outlays as an electoral tactic. Finally, a status quo bias might make it especially difficult for the majority party to alter the pattern of spending for programs already in place. If so, the best strategy for changing overall spending patterns would be to create new programs, and then focus on the relative distribution of spending across programs.

A few previous studies have examined the importance of party influence in distributive politics. Browning (1973) found that in 1970 districts

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[5]There are of course other models of politics in which parties play little or no role, but it is not clear what these models predict about the geographic distribution of expenditures. For example, the interest-group models developed by Olson (1965), Stigler (1975), Peltzman (1976), and Becker (1983) predict that the net transfers received by a group depends primarily on the group's ability to overcome free-riding and collect resources from its members for lobbying. This does not translate easily into testable hypotheses about the distribution of federal outlays, however, even if we are willing to use outlays as a measure of transfers.

represented by Democrats were more likely to receive levels of federal outlays above the median level than were districts represented by Republicans. Ritt (1976) found a mild positive relationship between average spending levels and Democratic control in 1971–72. Owens and Wade (1984) found a small positive effect of democratic vote percent in the 1978 congressional election on total outlays.[6] One problem with these studies is that they do not control for several potentially important factors, and in particular they do not control for a major accounting issue raised by the location of state capitals. Many federal programs allocate large sums to state governments for subsequent reallocation to the appropriate sub-state recipients. These outlays are typically reported as if all of the money was spent in the state capital, even when most of the money was distributed elsewhere in the state.[7] Since urban areas are disproportionately represented by Democrats, failure to control for this accounting problem may bias the results towards finding an effect of party control on federal outlays.

The empirical work in this paper improves on earlier studies in two ways. First, we treat the state capital issue carefully. We include an independent variable that controls for the fraction of a state's capital contained in each congressional district, weighted by the state population.[8] The second improvement in our analysis is that we attempt to differentiate between the various models of party influence discussed above. We do this in several ways. We compare programs with geographically concentrated benefits to programs with geographically diffuse benefits, since it is reasonable to expect that the former are more easily targeted than the latter. We also compare programs enacted during a period of solid Democratic control with programs enacted during a period of divided government. Finally, we compare two distinct party variables, one measuring the partisan leanings of each district's voters, and one reflecting the party affiliation of each district's representatives. Based on the arguments presented above, we should

[6] Two historical studies are also relevant. In an analysis of the allocation of river and harbor projects during the period 1889–1913, Wilson (1986b) found no significant difference between districts represented by Democrats and those represented by Republicans. Wright (1974) found evidence that New Deal spending was significantly higher in states that were more likely to be "pivotal" in presidential elections.

[7] In our sample, the average congressional district containing a state capital received approximately twice the amount of federal outlays as the average district that did not contain a state capital.

[8] Specifically, the control variable is defined as:
State Capital = (fraction of population of state capital living in district)*(state population).
An alternative solution is to simply exclude all congressional districts that contain all or part of a state capital within their boundaries, dropping 67 districts from the data set. Our results are not sensitive to the precise means by which we control for state capitals; full results are available from the authors on request.

expect both of these variables to be significant under the strong party model, but only the first to matter if the constrained party model holds.

3. Data Description and Empirical Specification

The data on federal outlays are drawn from the Federal Assistance Awards Data System (FAADS), compiled by Bickers and Stein (1992). The FAADS data sets contain annual, district-level outlays on a program-by-program basis for all federal domestic assistance programs, from 1984 through 1990. Examples of expenditures included in FAADS are social security and medicare, payments to agricultural producers, community development grants, and a wide assortment of educational and research grants. Excluded from FAADS are federal procurement expenditures, employee wages, and some insurance and loan programs.[9] On average, the programs included in FAADS comprise 56% of the total federal budget, or $523 billion (in 1990 dollars).

As noted above, party effects are likely to be greater for small programs with geographically concentrated benefits than for large programs with geographically diffuse benefits. We therefore divide our sample of 956 programs into two groups as follows. First, for each program we calculate the average number of inflation adjusted dollars allocated to each congressional district over the period 1984–90. Next, we compute coefficients of variation (c.v.'s) for each program based on the district averages.[10] We classify programs with c.v.'s below 2/3 as having low variation, and programs with c.v.'s above 2/3 as having high variation.[11]

The programs falling into the low variation category are large, broad-based, entitlement programs including social security, medicare, and veterans retirement benefits. Although there are only 16 programs in this group, they account for about 75% of the total dollars reported in FAADS. The average c.v. in this group is 0.45. The high variation category contains 940

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[9] The absence of data on military procurement and wages is unfortunate, because there may be significant differences in the distributions of military and other expenditures. Owens and Wade (1984) found that the Democratic vote percentage across districts in House elections was positively associated with welfare and public works outlays in 1978, but negatively correlated with military and agricultural outlays. On the other hand, Goss (1972) found that districts represented by Democrats had more military employment in 1968 than districts represented by Republicans. Our results must be interpreted with this caveat in mind.

[10] The coefficient of variation is defined as the standard deviation divided by the mean. A program that allocated the same number of dollars to each district would have a coefficient of variation of zero. If half of the districts received zero and the other half received an identical amount, the coefficient of variation would be equal to one.

[11] There is something of a natural ''break'' in the data at 2/3, that is, a relatively large gap in the ordered c.v.'s. We experimented with other cut-points as well (c.v. = 1/2, c.v. = 1), and obtained results similar to those reported below.

programs, with an average c.v. of 7.0. Among the largest programs included in the high variation category are highway construction, food stamps, feed grain production stabilization, and local education grants. Thus, our categories are similar, but not identical, to the division between "controllable" and "uncontrollable" outlays used in other work (e.g., Ippolito 1981, Kamlet and Mowery 1987).

The general form of our empirical specification is the following:

Outlays = f(Democratic vote share, voter turnout, party affiliation of district's representative, state capital, state population, district population, demographics)

Observations are congressional districts. Depending on the regression, the dependent variable is average yearly federal outlays to the district for all FAADS programs, low c.v. programs, or high c.v. programs.

We measure a district's support for the Democratic party using the average Democratic share of the two-party presidential vote in the 1976, 1980, and 1984 elections. This is probably a purer reflection of voter partisan leanings than congressional vote shares, since congressional voting is greatly affected by incumbency status (e.g., Gelman and King 1990). We also include a voter turnout variable, defined as the average percent of eligible voters casting presidential ballots in 1976–84, to capture the possibility that politicians are more responsive to voters than non-voters.

We control for both district and state population in our regressions. For programs that involve payments to individuals or are tied directly to population levels, controlling for district population is clearly important. We include state population to test the hypothesis that over-representation of small states in the Senate results in greater federal outlays to small states (e.g., Atlas et al. 1993).

It is not clear what comprises the proper set of demographic and socioeconomic "control" variables. On one hand, society at large may place some value on redistribution to certain groups, such as the poor, the elderly, and underprivileged minorities, and both parties may therefore support spending that targets these groups. If so, then variables such as income, age and race belong in the model as controls. Otherwise, if these groups tend to vote Democratic more often than Republican, then failing to include the appropriate controls may overstate the importance of party. On the other hand, the parties may use certain demographic variables specifically to identify their supporters, and design expenditure programs to target those groups. If so, then controlling for demographic factors will understate the importance of party in the allocation of federal spending. In the extreme,

if we discovered the "formula" (or bargaining equilibrium) used by the parties to determine the distribution of federal spending, and how that formula has changed over time, then we could perfectly explain the observed pattern of spending using the relevant set of demographics alone. At that point, adding a party variable would have no additional explanatory value, even if parties were instrumental in designing the formula. We take an agnostic view on this issue, and discuss results for different specifications that include a varying range of controls.

Summary statistics for the full set of variables included in our analysis are presented in the appendix. The demographic variables included are taken from the 1980 Census of Population.[12]

4. Empirical Results

Results for our basic specifications are presented in Table 1.[13] All variables are transformed as natural logarithms, so the coefficients can be interpreted as elasticities.[14] We have experimented with various functional forms, and our findings are quite robust.

The first two columns present estimates for all programs. Columns 3 and 4 give estimates for the set of programs with low coefficients of variation, and the last two columns are for the set of high variation programs. The odd-numbered columns include only state capital and population controls. Even-numbered columns also include controls for various demographic and socio-economic factors.

Focusing first on the specifications with only state capital and population controls, the coefficient on the Democratic voter support variable is significantly positive, both statistically and substantively, in all three columns. As expected, programs with low coefficients of variation (columns 3 and 4) are least affected by Democrat support. The elasticity of federal outlays with respect to Democratic vote percent is substantially larger for programs with high coefficients of variation (0.91 vs 0.25). Because the

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[12]Data on presidential voting are from Ehrenhalt (1983, 1985). Demographic data are from the U.S. Department of Commerce, Census of Population and Housing, 1980, Summary Tape Files 1D and 1H.

The correlations between Democratic support and some of the demographic variables are fairly high, so the reader should keep in mind the uncertainty about the appropriate set of controls in interpreting the regressions that follow. The highest correlations between the percent voting Democratic and demographic variables are .68 for percent black, and −.45 for median household income.

[13]Data used in this analysis are available from the authors on request. All regression analyses in this paper were performed using the statistical package STATA.

[14]In those cases where the right-hand side variable is equal to zero, implying that its log is undefined, we assign the log of that variable a value of zero.

Table 1. The Impact of Democratic Vote Share and Voter Turnout on Federal Assistance Expenditures Per Congressional District

	All Programs		Programs with Low Coefficients of Variation		Programs with High Coefficients of Vartiation	
	(1)	(2)	(3)	(4)	(5)	(6)
Dem Pct	.424**	.225**	.248**	.050	.906**	.743**
76–84	(.052)	(.058)	(.053)	(.057)	(.137)	(.175)
Turnout	.371**	.325**	.156**	.017	.735**	1.132**
	(.075)	(.079)	(.076)	(.077)	(.197)	(.239)
State Population	.091**	.104**	.036**	.033*	.047	.131**
	(.014)	(.014)	(.015)	(.013)	(.038)	(.041)
District Popula-	.412	−.213	.868**	.181	−.466	−.382
tion	(.232)	(.209)	(.234)	(.205)	(.609)	(.635)
State Capital	.084**	.088**	−.011**	−.008*	.269**	.270**
	(.004)	(.004)	(.004)	(.003)	(.011)	(.011)
Median Income	—	−.236**	—	−.099	—	−.954**
		(.066)		(.064)		(.199)
Population Over	—	.375**	—	.475**	—	−.222
Age 65		(.043)		(.042)		(.130)
Rural	—	−.000	—	−.003	—	.004
		(.003)		(.003)		(.008)
Black	—	.005	—	.006	—	−.056
		(.011)		(.011)		(.034)
Constant	15.1**	21.2**	9.2**	13.8**	25.5**	35.5**
	(3.0)	(2.5)	(3.1)	(2.6)	(8.0)	(8.1)
Adjusted R^2	.52	.66	.13	.42	.61	.64
SE of Regr.	.23	.19	.23	.19	.60	.59

Notes: The dependent variable is ln(average annual outlay per district) over the period 1984–90. All right-hand side variables except for the constant are transformed as natural logs, therefore all parameters are elasticities. In those cases where a right-hand side variable is equal to zero before taking logs, a logged value of zero is assigned. Number of observations equals 435 in all columns. Standard errors in parentheses. The cutoff between high and low variation programs is a coefficient of variation equal to .67.
** denotes significance at .01 level; * denotes significance at the .05 level.

low variation programs are three times as large, however, the effect of Democratic support is only slightly larger in dollar terms for high variation programs. Holding other factors constant at their average values, increasing the average level of Democratic presidential voting in a district from 50% to 60% results in an increase of 5% for federal outlays in the low variation category ($45 million per district per year in 1990 dollars, or $87 per capita per year), and 18% in the high variation groups ($54 million per district per year, or $103 per capita per year).

The even columns of Table 1 add median income and percent of the population age 65 or older as demographic controls. In all cases, inclusion of the demographic controls reduces, but fails to eliminate, the coefficient on Democratic voter support.[15] Programs with high coefficients of variation continue to be more heavily skewed towards Democratic constituencies. A shift from 50% to 60% Democratic support now translates into a $17 annual increase in per capita low variation spending, and an $84 increase in high variation outlays.

Voter turnout is also positively related to federal outlays. In all cases, point estimates imply that districts with higher turnout receive more federal outlays. In all but one column, the estimates are statistically significant. As with Democratic voters, high variation programs show the greatest responsiveness to voter turnout. A one standard deviation change in turnout (7.8 percentage points) evaluated at the mean of our sample (51% turnout) translates into a 0–2% increase in outlays in the low variation category, and an 11–17% increase in the high variation groups, depending on the choice of specification.[16]

If over-representation in the Senate provides benefits for small states, then the coefficient on state population should be negative. In fact, the sign on state population is positive and significant in all cases. The state capital variable is large and extremely significant for high variation programs, but is small and negative for low variation programs, few of which are administered through state capitals. District population has little systematic effect on federal outlays, but this is not particularly surprising since this variable exhibits so little variation.

The demographic variables have some success in explaining federal outlays. The percentage of the population over age 65 is an important predictor of low variation programs, which are dominated in dollar value by social security and medicare. High variation programs are inversely related to district median income implying that such programs tend to be somewhat redistributive. Neither the percent of the population that is rural nor the percent black are statistically significant.

As noted earlier, it is not clear what constitutes the proper set of demographic and socioeconomic controls for analyzing the impact of parties on the allocation of federal spending. In order not to exaggerate party influ-

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[15] When districts containing state capitals are dropped from the sample, the estimated impact of Democratic support rises slightly in all specifications.

[16] This effect is not large enough, however, to make it rational for an individual to vote, or to switch allegiance from the Republican party to the Democrats. The estimates imply that each voter increases his or her own federal outlay by less than one cent by voting Democratic.

ence, we must control for factors that both parties include in their definition of "social welfare." However, the inclusion of variables that parties use to identify and target their supporters will tend to understate the role of parties. Fortunately, the exact set of controls does not appear to matter much, especially for spending in the high variation category. The specification reported in Table 1 includes a relatively limited set of controls. However, the high correlation between Democratic support and high variation federal outlays persists even when we include controls such as region, number of veterans, population under the age of 18, Hispanic population, manufacturing employment, professional employment, and agriculture, fishing and forestry employment.[17]

Congress may have more control over the allocation of spending for programs with formulas than for programs where executive agencies have greater discretion, such as project grants. Also, partisan politics is almost certain to be a factor when determining formulas. To test this hypothesis, we divide high variation programs according to whether or not the allocation of spending across states or localities is prescribed by a legislated formula or a formula made by administrative rule.[18] The results, presented in Table 2, show that formulaic programs are heavily biased towards Democratic voters, whereas there is substantially less bias towards Democrats in

[17] Controlling for other factors, districts with a large population under the age of 18, a large amount of manufacturing employment, and districts in the South tend to receive fewer high-variation federal dollars, while districts with a large amount of agricultural, fishing and forestry employment, and a large amount of professional employment, tend to receive more money. The other controls are not statistically significant.

As an additional check on whether our results concerning the role of parties are robust, we divide the sample into "research" and "non-research" programs (using a variable provided by Bickers and Stein). Research dollars flow disproportionately to university campuses, which tend to be liberal and Democratic. However, government-sponsored research is plausibly a spending category that both parties value highly (i.e., it is plausibly part of the "social welfare function"), in which case any correlation between federal funds and Democratic voters should be treated as spurious. Not surprisingly, outlays on research programs are even more heavily skewed towards Democratic voters than other outlays. The research category is quite small, however, accounting for only 4% of the total money in FAADS. Consequently, the results for the non-research category are similar to those in Tables 1–4.

[18] We use the variable Formula, provided in the Bickers and Stein data set, to divide the sample. Programs with Formula = 1 are those such that "Allocations to states or their subdivisions in accordance with a distribution formula prescribed by law or administrative rule" (Bickers and Stein codebook). Programs that involve direct payments to individuals are not classified as Formula = 1 since the allocations are not made to states or their subdivisions. All but one of the low variation programs in our sample involve direct payments to individuals, so we limit our analysis to high variation programs in Table 3. Interestingly, the one low variation program that is administered by formula (Medicaid) exhibits a bias towards Democrats, with a coefficient of .802 (standard error = .13) in a specification corresponding to the even columns of Table 2.

Table 2. The Impact of Democratic Voters on the Allocation of Formula and Non-Formula Programs

	Formula		Non-Formula	
	(1)	(2)	(3)	(4)
Dem Pct	1.047**	1.079**	.772**	.494*
76–84	(.159)	(.208)	(.160)	(.196)
Turnout	.999**	1.161**	.498*	1.046**
	(.228)	(.284)	(.230)	(.267)
State Population	.221**	.211**	−.082**	.066
	(.044)	(.049)	(.044)	(.046)
District Population	−.704	−.067	.120	−.284
	(.707)	(.754)	(.711)	(.709)
State Capital	.364**	.361**	.189**	.192**
	(.013)	(.013)	(.013)	(.012)
Median Income	—	−.043	—	−1.478**
		(.237)		(.223)
Population Over Age 65	—	−.330*	—	−.140
		(.154)		(.145)
Rural	—	−.011	—	−.019*
		(.010)		(.009)
Black	—	−.019	—	−.054
		(.041)		(.038)
Constant	26.2*	22.2*	18.1	38.1**
	(9.2)	9.7	(9.3)	(9.1)
Adjusted R^2	.67	.68	.40	.49
SE of Regression	.70	.70	.70	.65

Notes: The dependent variable is ln(average annual outlay per district) over the period 1984–90 for high variation programs that are administered through formulas (columns 1 and 2), or are not administered through formulas (columns 3 and 4). All right-hand side variables except for the constant are transformed as natural logs, therefore all parameters are elasticities. In those cases where a right-hand side variable is equal to zero before taking logs, a logged value of zero is assigned. Number of observations equals 435 in all columns. Standard errors in parentheses. The cutoff between high and low variation programs is a coefficient of variation equal to .67.
**denotes significance at .01 level; *denotes significance at the .05 level.

non-formula programs, confirming the hypothesis. Districts with high turnout appear to benefit regardless of whether a program is determined by formula. Non-formula expenditures go disproportionately to lower income districts, but formula programs do not.

Table 3 presents results comparing programs initiated in different time periods. We divide our sample of programs into three periods: 1974 and earlier, 1975–81, and 1982–90. The logic underlying our choice of time periods is as follows. Factoring in lags between the passage of legislation

Table 3. Comparison of Programs Initiated in Different Years State Capital, Population, and Basic Demographic Controls Only

	Programs Begun 1974 or Earlier		Programs Begun 1975–81		Programs Begun 1982 or Later
	(1) Low CV	(2) High CV	(3) Low CV	(4) High CV	(5) High CV
Dem Pct	−.048	.836**	.579**	1.224**	−.074
76–84	(.056)	(.286)	(.120)	(.343)	(.285)
Turnout	.022	1.530**	−.157	1.723**	.304
	(.077)	(.390)	(.164)	(.469)	(.390)
State Population	.011	.084	−.015	−.066	−.118
	(.013)	(.068)	(.028)	(.081)	(.067)
District Population	.216	−.576	.703	1.277	−1.972
	(.204)	(1.036)	(.434)	(1.224)	(1.035)
State Capital	−.008*	.277**	.023**	.104**	.129**
	(.003)	(.018)	(.007)	(.021)	(.018)
Median Income	−.075	−1.686**	.046	−1.542**	−1.089**
	(.064)	(.325)	(.136)	(.391)	(.325)
Population Over Age 65	.487**	−.089	−.052	−.309	.008
	(.042)	(.212)	(.089)	(.254)	(.211)
Rural	.007**	.052**	−.017**	.025	.013
	(.003)	(.014)	(.006)	(.017)	(.014)
Black	.015	−.047	−.019	−.125	.004
	(.011)	(.056)	(.023)	(.067)	(.056)
Constant	12.5**	42.6**	7.5	19.4	52.7**
	(.26)	(13.3)	(5.6)	(16.0)	(13.3)
Adjusted R^2	.39	.47	.15	.31	.21
SE of Regr.	.19	.95	.40	.64	.95

Notes: The dependent variable is ln(average annual outlay per district between 1984–90) for programs initiated in the period stated. All right-hand side variables except for the constant are transformed as natural logs, therefore all parameters are elasticities. In those cases where a right-hand side variable is equal to zero before taking logs, a logged value of zero is assigned. Number of observations equals 435 in all columns. Standard errors in parentheses. The cutoff between high and low variation programs is a coefficient of variation equal to .67.
** denotes significance at .01 level; * denotes significance at the .05 level.

and budgets and the flow of dollars, the 1982–90 period roughly corresponds to the Reagan era, during which the Republicans controlled not only the White House, but for six years also controlled the Senate. The 1975–81 period corresponds to a time of large Democratic majorities in both chambers of Congress or unified Democratic control of both Congress and

the presidency. For programs initiated prior to 1975, sufficient time had passed by the mid 1980s for Congress to amend or cancel programs that further subdivision would be too arbitrary. Within each period we continue to differentiate between high and low variation programs, except that no new low variation programs began during the 1982–90 period. Table 3 presents only the specification that includes the demographic controls; as above, however, the conclusions are not sensitive to the particular choice of controls. Democratic voter support is strongly related to federal outlays for both high and low variation programs started between 1975 and 1981 (columns 3–4). As before, high variation programs are affected to a larger extent than low variation programs. For programs initiated prior to 1975 (columns 1–2), Democratic support has a smaller coefficient for both types of spending, but remains positive and statistically significant for high variation programs. Programs initiated during the period of divided government (column 5), in contrast, show no bias toward Democrats. These results are consistent with the view that the Democratic party's ability to enact legislation favoring their constituents is limited. Without solid majorities in both chambers, and perhaps control of the presidency as well, there appears to be little partisan bias in newly created programs.[19]

Another set of regressions provides further evidence that party influence over outlays is limited (to conserve space we do not present the details in tabular form). If the majority party can direct federal spending to specific districts, then holding the number of Democratic voters fixed, the party should allocate more money to districts occupied by Democratic representatives. To test this hypothesis, we replicated the analyses in Tables 1–3, adding an additional variable measuring the party affiliation of a district's representative.[20] The coefficient on this party affiliation variable is never positive and statistically significant, and in fact is sometimes significantly negative. This suggests that congressional Democrats cannot easily target specific districts.

[19]There is a striking difference between our findings about the effectiveness of the majority party in the House and conclusions about partisan cohesion and conflict based on roll-call votes. Rohde (1991) shows that Democratic cohesion on roll-calls was low during the mid and late 1970s, and relatively high during the 1980s. Also, the degree of partisan conflict was much higher during the 1980s. Thus, low overall cohesion on roll-calls does not imply that the majority party is unable to implement new spending programs that benefit its constituents. Also, a higher level of intra-party cohesion and inter-party conflict on roll-calls does not necessarily lead to a larger partisan bias in the set of enacted spending programs.

[20]This variable is defined as the number of years between 1984 and 1992 that a district was represented by a Democrat.

A final result that suggests a limited role for parties comes from treating the data set as a panel with district-fixed effects included, rather than averaging across years and running cross-sectional regressions as we have throughout the paper. Unlike the cross-sectional estimates, a fixed-effects model identifies the parameters only using information based on within-district variation over time. In such specifications, the coefficients on variables measuring the Democratic congressional candidate's share of the two-party vote in a district,[21] and variables measuring the party affiliation of a district's representative, are always small and statistically insignificant. This suggests that parties are unable to quickly alter the level of resources flowing to a particular district in response to a change in circumstances in that district. Rather, it appears that the majority party is restricted to directing federal dollars towards broadly defined constituencies, and only over relatively long periods of time.

5. Discussion and Conclusion

The results above show that the pattern of federal domestic outlays is skewed in favor of districts with a large share of Democratic voters. Small spending programs with geographically concentrated distributions of benefits tend to favor Democrats more than programs with a broad geographical recipient base. Programs where spending is allocated according to formulas tend to be biased more towards Democrats than programs where bureaucratic agencies have greater discretion. Programs initiated in the mid to late 1970s, when Democratic control was especially strong, exhibit the greatest bias towards Democrats, while programs passed in the Reagan era show little pro-Democratic bias.

In terms of the three models of distributive politics discussed in section 2, our findings most strongly support the third, which recognizes a substantial role for political parties. Our results are difficult to reconcile with the standard view that political parties in the United States are inconsequential actors in distributive politics. At the same time, our results show that the capabilities of parties are limited, implying that models in which parties are treated as unitary actors are also inaccurate descriptions of federal budget politics. A solid majority in Congress appears to be necessary for initiating partisan spending programs. Parties appear unable to precisely target large amounts of federal funds to particular districts, nor can they substantially

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[21] We use the congressional rather than presidential vote here because, given the short time span of our data, the two-year congressional term is more amenable to this type of analysis than the four-year presidential term.

alter the flow of federal dollars to districts over short time periods in re-
sponse to changes in district circumstances.[22]

Even given these limitations, many students of United States politics
will be surprised by the apparent importance of parties in distributive poli-
tics. How has the Democratic majority succeeded in skewing the allocation
of spending to favor Democratic voters? This question has two parts: (1)
how have Democrats identified the types of voters that consistently support
their party (and who, presumably, respond to certain federal spending by
maintaining or increasing their support); and (2) how have Democrats man-
aged to pass the necessary authorizing and appropriations legislation? Al-
though we cannot provide thorough answers to such broad questions here,
we can at least draw attention to some partial answers offered by others,
and offer some speculations of our own.

With respect to part (1), polling data, survey data, and election returns
provide information on the voting patterns of a variety of demographic and
socioeconomic groups. It is straightforward to discover that targeting areas
with large numbers of minorities, low-income citizens, union members, or
universities and colleges is a good way to reach Democratic voters. Con-
gressmen, being skilled politicians adept at winning elections, presumably
know even more about voting patterns, at least in their own districts. It is
therefore likely that they can design programs to target Democratic voters
even more efficiently. As noted above, if we could discover the exact algo-
rithm used by the Democrats, and how it has changed over time, then we
could perfectly predict the distribution of spending across districts even
without including a direct measure of Democratic voter support (unless the
Democrats themselves utilized such a variable in their algorithm). Evi-
dently, however, even with the wide range of demographic variables in-
cluded in our regressions, we have not yet found the algorithm.

With respect to part (2), federal spending is by many accounts one of
the most partisan policy areas. Kiewiet and McCubbins (1991, 12) note
that "it is in their spending priorities that parties tell the electorate most
clearly what policies they favor and what groups they represent." Conse-
quently, it is not surprising to find the leaders and caucuses of both parties
actively involved in the decision-making process on appropriations bills,
spending authorizations, and budget resolutions (e.g., Fenno 1966, Mayhew

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[22] Although we have interpreted our results as evidence that the Democratic party in
Congress directs resources toward its constituents, another possible explanation is that groups
receiving large amounts of federal outlays respond by voting for the Democratic majority.
Regardless of which direction the causality runs, however, the ultimate message is the same:
parties appear to be an important consideration in distributive politics, either as determining
factors in the allocation of federal dollars, or as institutions upon which voters attach credit
or blame in response to the pattern of federal outlays.

1966, Ripley 1967, 1969, Havemann 1978, Ippolito 1981, Sinclair 1983, Pallazzolo 1992).

The tools available to the majority leadership and caucus are formidable, especially in the House since the reforms of the 1970s. The leadership controls floor scheduling; the Rules Committee has the power to grant or withhold restrictive rules; the Democratic caucus selects committee chairmen, makes committee assignments, and grants transfer requests; and the Speaker makes all conference committee assignments. Less formally, party leaders tend to be especially skillful parliamentarians (Froman 1967), and they dominate the communication networks in Congress (Ripley 1967, 1983). As a result, leaders are often called upon to broker vote trades, and they can stake out positions on issues which become focal points for coalition formation (Calvert 1988). Party leaders are also identified as key public spokesmen, which allows them to focus attention on issues and put pressure on members to act (Sinclair 1983).

To ensure party control of key committees, the majority party always holds a disproportionate share of the seats on Appropriations, Budget, Rules, and Ways and Means relative to their share of seats in the House as a whole (the Democrats have typically maintained three-to-two ratios on the first two committees, a ratio of more than two-to-one on Rules, and a ratio slightly below two-to-one on Ways and Means). Moreover, as Cox and McCubbins (1993) show, party loyalty is an important factor in determining whether Democratic requests for committee assignments and transfers are granted, especially to Appropriations, Rules, and Ways and Means. Kiewiet and McCubbins (1991) show theoretically how the Speaker can use his authority over conference committee assignments, together with closed-rule consideration of conference reports, to move policy in the direction preferred by the majority party.

Fenno (1966), Sinclair (1983), and Cox and McCubbins (1993) argue that scheduling is also an important power. As Fenno notes, getting a bill onto the floor quickly usually means less opposition, because the committee's information advantage is at its maximum and opponents have less time to organize. Empirically, Fenno shows that during the 1950s and early 1960s appropriations bills were scheduled quickly, and generally passed only a few days after the appropriations committee reported its bill. Cox and McCubbins (1993) show formally how scheduling power enables the leadership to obtain legislative outcomes they prefer, especially when time is a scarce resource, and how this power induces forward-looking committees to report legislation favorable to the majority party.

With regard to coalition formation, the central informational and bargaining position occupied by party leaders makes it logical for ''intense minorities'' who must build legislative majorities to turn to one or the other

party first. Truman (1959), Mayhew (1966), Ripley (1969), and Murphy (1974) present evidence that the Democratic leadership has frequently helped intense minorities pass their legislation via party-based coalitions. A typical coalition involves a core of "interested" legislators from both parties, together with a majority of the "uninterested" Democrats, pitted against most of the "uninterested" Republicans. Such coalitions have appeared on a wide range of issues, including rural electrification, agriculture appropriations, farm commodity programs, food stamps, urban renewal and public housing projects, western water and hydroelectric power projects, and Appalachian regional development programs. These coalitions appear to be especially effective on legislation involving federal spending. For example, Mayhew notes that on labor issues, "on votes involving appropriations or federal subsidies, the Democratic-centered labor coalition tended to function smoothly. In direct confrontations with management, erosion of the strength at the margins of the coalition. . . produced a rather consistent record of failure." (Mayhew 1966, 122).

The studies by Truman, Mayhew, and Murphy, along with the work of Turner (1951), Shannon (1969), Poole and Daniels (1985), Poole and Rosenthal (1991), Snyder (1994) and many others, show that party-based coalitions have left clear tracks in the congressional roll-call record. What our paper shows, together with the work of Budge and Hofferbert (1990), Kiewiet and McCubbins (1991) and others, is that these coalitions have also had a significant impact on policy outcomes, specifically on the distribution of actual federal spending.

APPENDIX
Summary Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
Average Annual Federal Assistance (Billions of Dollars Per District)	1.20	.590	.449	6.29
• Low Variation Programs	.904	.204	.078	2.12
• High Variation Programs	.295	.560	.012	5.25
Dem Pct (76–84)	.460	.106	.212	.931
Turnout	.510	.078	.264	.764
State Population (000s)	9,538	6,992	444	24,697
District Population (000s)	519	25	393	691
State Capital Variable (% of state capital in district* state population) (000s)	531.4	2,015	0	20,103
Median Household Income	17,110	3,704	7,453	29,806
Population Over Age 65 (000s)	156	38	43	342
Rural (%)	26.3	22.6	0	81
Black (%)	10.3	14.0	0	90

Notes: All variables defined at the district level. Expenditure variables are district averages in 1990 dollars for the period 1984–90. Voting variables are district averages across the 1976, 1980, and 1984 presidential elections. All demographic variables are taken from the 1980 Census of Population.

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