Comments Welcome

Election Goals and Income Redistribution: Recent Evidence From Albania

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Section I. Introduction

This paper examines the impact of political competition on block grants from federal to sub-federal levels of government. We model the extent and direction of income redistribution as determined proximately by the political agendas of central decisionmakers and, at a deeper level, by the institutions within which they find themselves operating. We contrast two institutional frameworks that give way to differing political objective functions and, in turn, to strikingly different empirical predictions of the ways in which politics should affect fiscal policy. Lessons learned here may prove important in understanding limits on the types of redistribution possible via block grants, given the institutional framework, in both developing and developed countries.

We take as a concrete example the extent to which political forces in Albania affect social assistance block grants from the central government to the local governments (communes). Figure I presents strong *prima facie* evidence that politics play a role in income redistribution within the country. The first panel in Figure I plots the amount of social assistance received per family in each commune in October 1995 against the percentage of the commune's district that voted with the majority (Democratic) party in local elections held in 1992. The correlation between these two variables is quite high (0.40) and suggests that politics may help to determine allocations.[1] The second panel in Figure I is drawn from survey data collected at the commune level in the fall of 1996, and plots social assistance per family in the middle of 1996 against the percent of the commune that voted for the referendum on the constitution (favored by the Democratic Party) in 1994. We see the same pattern here: communes that voted with the Democratic

[1] In a regression controlling for heteroskedasticity with district-specific clustering, the coefficient on the percent voting for the Democratic party has a t-statistic of 3.0 (244 communes). Results for Figure I are similar if the total amount of social assistance received by the commune (rather than that per family) in 1994, 1995, or 1996 is plotted against the 1992 election results or plotted against the fraction of the commune's district that voted for the referendum on the constitution (favored by the Democratic party) in 1994.

party received a higher level of assistance in a later period. In what follows, we hope to explain why we would expect such allocations, given the political equilibrium in Albania.

We contrast two possible political objectives in dividing block grant funding: maximizing the number of seats won in the legislature, and maximizing the probability of winning a majority of seats.[2] If the decisionmaker's objective is to maximize the number of seats obtained—as in some parliamentary elections—more funds should be allocated to communes where races are tight. On the other hand, if the decisionmaker's objective is to maximize the probability of winning a majority of seats in the legislature—as is needed to form an executive in some systems—additional weight should be given to communes thought to be 'pivotal'. Such differences are predicted by Snyder (1989), in a theoretical examination of campaign spending, and by Lindbeck and Weibull (1988), in modeling income redistribution schemes. This paper provides empirical tests of the impact of election goals on income redistribution.

We find evidence that central decisionmakers use the discretion built into the block grant system to further their political ends. In this way, the results speak to the current debate on decentralization of government programs in developing countries. Decentralization is thought to increase the use of local information, enhance government accountability, and to limit leakage from social programs. (See Prud'homme (1995) and McLure (1995) for discussion on these issues.) Such gains must be weighed against losses caused by politicians using their discretion to influence the allocation of block grants. Results presented here suggest that the political effects may be large.

This work is also closely related to research on fiscal federalism in the United States. Wright (1974) finds strong correlation between states' past votes in presidential elections and their block grant allocations during the New Deal administration of Franklin Roosevelt, a result that is robust to the inclusion of variables measuring the power of states' congressional representatives (Wallis (1996)). The

[2]We turn in Section IV to alternative explanations of our findings.

findings of many empirical studies suggest that politics may be responsible for large efficiency losses. (See Inman (1988), Hird (1992).) The work presented below differs from much of the empirical work in this area in explicitly modeling political equilibria and developing an empirical strategy to test alternative models of political goals.

We will proceed as follows. In Section II we model the political objective functions that derive from differing institutional frameworks, and discuss the economic and political equilibria that result. In Section III we introduce the Albanian case study. We present evidence on the importance of political institutions for this case in Section IV.

Section II. Political Institutions, Political Equilibria and Income Redistribution

In this section, we model block grant allocations as the equilibrium outcome of a political process. In doing so, we will stay close to the details of the Albanian case that we wish to understand, below.[3]

We assume there are n citizens, indexed by i, each with an initial endowment ω_i. Citizens are divided into m communes in the country. We assume that placement in a commune is given historically and is exogenous to the model. Each individual i is a member of only one commune k, which has a population of n_k. We assume that all members of the commune vote.

There are two political parties, A and B, which vie for votes by promising to deliver block grants to the communes. A voter in commune k is promised a lump sum of x_k by party A, should it win the election, and a lump sum of y_k by party B. We assume that the allocations promised by the parties are budget balancing: $\sum_k n_k x_k = \sum_k n_k y_k = 0$.

Individuals vote to maximize their utility, which depends both upon their consumption and upon

[3]The model presented here is closely related to Lindbeck and Weibull (1987). We will use their notation where possible, and will make use of some of their results on the existence and uniqueness of equilibria.

their feelings toward the political parties. Individual i consumes c_i, which is $(\ _i + x_k)$ if party A wins the election and $(\ _i + y_k)$ if party B wins the election. Utility from this consumption is given by $v_i(c_i)$ with $v' > 0$ and $v'' < 0$. We will assume that the marginal utility at consumption level zero is infinitely high, to rule out corner solutions. Individual i's utility is separable in consumption and in their feelings toward the party in office:

$$u_i = v_i(c_i) + a_i = v_i(\ _i + x_k) + a_i \qquad \text{when party A wins}$$

$$= v_i(c_i) + b_i = v_i(\ _i + y_k) + b_i \qquad \text{when party B wins.}$$

In Albania, the opposition (Socialist) party has roots in the regime that ran the country until 1990. For this reason, some citizens would experience a loss of utility, unrelated to consumption, if the Socialist party took power; for others, utility would be enhanced. The parties understand that individuals vary in their party preferences, but do not know with certainty individuals' valuation of party A relative to B. Specifically, we assume that the difference in value $(b_i - a_i)$ is a random variable that is characterized by a cumulative distribution function F(·), which is twice continuously differentiable with $F' = f$ everywhere positive. The political parties observe x_i with certainty, and know the distribution function F.

Individuals vote for party A when $u_i(\ _i + x_k, a_i) > u_i(\ _i + y_k, b_i)$, which is true with probability p_i:

$$p_i = prob[u_i(\ _i + x_k, a_i) > u_i(\ _i + y_k, b_i)] = F[v_i(\ _i + x_k) - v_i(\ _i + y_k)].$$

Individuals vote for party B with probability q_i, which is equal to $(1-p_i)$. In order to obtain equilibrium allocations (x^*,y^*), we must know the objective function of the decisionmaker. We will contrast two models. In the first, we assume the decisionmaker wishes to maximize the number of votes received by his or her party. This would be true, for example, if the decisions on allocations were made by the legislature, and parties participated in at-large elections for representation in a legislature.

At-large legislative elections

In that case, party A would choose a set of block grants to maximize the difference between the expected number of votes it receives and the number it expects party B to receive. Denoting the votes received by party A, and n_B the votes received by party B, the decisionmaker for party A would choose a set of grants to maximize $E(n_A-n_B) = \sum (p_i - q_i)$. A pure strategy Nash Equilibrium for this model can be characterized by the set of block grants (x^*,y^*) that are feasible for which the following set of inequalities

$$E(n_A \bullet n_B|x,y^*) \leq E(n_A \bullet n_B|x^*,y^*) \leq E(n_A \bullet n_B|x^*,y)$$

hold:

for all (x^*,y^*) that satisfy budget balance. Lindbeck and Weibull (1987) show[4] that if (x,y) is a Nash equilibrium of this model, then $x=y$ and there is a $\lambda>0$ such that for all groups k:

$$\Sigma_{i \in k} \; v_{i'}(c_i) \; f_i(0) = n_k \quad .$$

[4]The first order conditions for optimal choices of block grants are as follows. For party A: $\Sigma_{I \in k} v_i'(\omega_i + x_k)\, f_i(t_i) = \lambda n_k$ and for party B: $\Sigma_{I \in k} v_i'(\omega_i + y_k)\, f_i(t_i) = \mu n_k$, where $t_i = v_i(\omega_i + x_k) - v_i(\omega_i + y_k)$. The ratio of these first order conditions, λ/μ, is independent of k. Then if for some commune g party A offered more than party B ($x_g > y_g$), budget balance would require party A to offer less ($x_h < y_h$) in some other commune h. Given diminishing marginal utility of income, the ratio of first order conditions would then not be independent of commune.

(1)

The decisionmaker's optimal strategy is to spend the block grant to equalize between communes the average change at the margin in the probability of a vote for party A. Intuitively, in communes where the densities are higher (larger f_i's), the marginal utilities of consumption will be lower in equilibrium. With diminishing marginal utility of consumption, this implies that more grant money flows to communes where the density of marginal voters is higher.

Suppose all densities are translates of a unimodal and symmetric density function f (so that $f_i(t) = f(t+\alpha_i)$), where α_i is a measure of individual I's bias in favor of party A. Then α_i provides a measure of individual I's party bias, $(a_i - b_i)$. (See Figure II.) If party preferences are identical within groups ($f_i = f_j$, for i and $j \in k$) and all people have the same consumption preferences ($v_i = v_j$, all i and j) then equilibrium condition (1) implies

$$\Sigma_{i \in k} \; v'(c_i) / n_k \;\; = \;\; / \; f(\quad_k).$$

(2)

In equilibrium, the marginal utility of income will be lower in communes where $f_k(\alpha_k)$ is higher.[5] These are communes containing 'marginal' or 'swing' voters. (The density $f_k(\alpha_k)$ is large when $f_k(0)$ is large, which is the case when there is little bias in favor of either party.) Lindbeck and Weibull discuss conditions for existence of an equilibrium in this model. Uniqueness is readily shown.

[5]Our notation now reflects the fact that for individuals i and j within the same commune, $\alpha_i = \alpha_j$ and $f(\alpha_i) = f(\alpha_j)$.

Equation (2) forms the basis of one of our empirical tests below. If we assume that all individuals within a commune have an equal endowment, $\omega_i = \omega_j$, for i,j $\in$ k, we can re-write equation (2) as

(3) $$X_k = [\ / f(\ _k)]\ n_k \bullet \ _i\ n_k$$

where ϕ is the inverse of v' and $X_k = \ _I\ x_k n_k$ is the total block grant to commune k. At the heart of it $[\ /f(\ _k)\ ]$ is a measure of the extent to which commune k is a 'swing' commune. We will approximate $[\ /f(\ _k)\ ]$ by the absolute value of the distance from 0.50 of the communes' vote on the constitutional referendum in 1994.[6] Communes' initial endowments, (n_k) will be represented by the number of families for whom the communes appealed to the center for social assistance, and by additional commune-level measures of endowment such as household land holdings.

We expect that when the distance from 0.5 is large, $(1/ f(\ _k))$ will be large, and $[\ 1/ f(\ _k)]$ will be small. If the decisionmaker's objective is to maximize the number of votes received, we would expect a negative relationship in the data between distance from 0.5 and grant allocation. This forms the basis of our empirical test of this model.

We will contrast this motivation for block grant allocation with another: one in which the decisionmaker is not attempting to maximize the number of votes received by his or her party, but rather to maximize the probability of winning the election. Although these two objectives can give way to observationally equivalent block grant allocations in some circumstances, they need not. We explore the cases in which they offer differing predictions of allocation.

[6] We have also approximated this using the distance from 0.50 of the percent of the communes' vote for the Democratic party in local elections held in 1992. The results are qualitatively and quantitatively similar to those presented here. We prefer to center our analysis on the referendum vote, because information on this vote is available for a larger number of communes.

Presidential Elections

The decisionmaker in some circumstances may be the country's leader who is elected by a simple majority vote. This represents the election of the President by Parliamentary vote in Albania, discussed below. If the President makes decisions on block grants, we would expect to see block grants made to maximize the probability that the President wins the next election, rather than to maximize the size of the majority achieved.

Assume now that $(b_i - a_i)$ are statistically independent, and that $m = n$. That is, there is one voter for each commune. (This would be the representative to the Parliament, in the Albanian case.) Let $e_i = 1$ if individual i votes for party A, else $e_i = 0$. Denote the probability that A wins the election as $_A = Pr[\ e_i > n/2]$. In this model, (x^*,y^*) is a pure strategy Nash Equilibrium if $_A(x,y^*)$ $_A(x^*,y^*)$ $_A(x^*,y)$ for all budget balancing choices of x and y.

Under the assumption that the electorate is large, the number of votes each party receives is approximately normally distributed by the Central Limit Theorem. Moreover, if $p_i q_i$ as n , then e_i will be asymptotically normally distributed with mean p_i and variance $(\ p_i q_i)$. The probability that A wins the election can be approximated:

$$_i(x,y) = (2\ )^{-1/2} \int_{(p)}^{\infty} \exp(-t^2/2)dt$$

(4)

where $(p) = (n/2 - \ _i p_i)\ (\ _i p_i(1-p_i))^{-½}$. If (x,y) is a Nash Equilibrium for the model, then $x = y$ and there is a $\lambda > 0$ such that

$$v_{i'}(c_i)\ f_i(0)\ [\Sigma\, p_j^o q_j^o\ ^8 +\ (p_i^o \bullet q_i^o)\ \Sigma(p_j^o \bullet q_j^o)/4] = \quad .$$

(5)

where $p^o = F[x=y]$ and $q^o = (1-F[x=y])$. Note that if parties are equally popular $p^o = q^o$, the last expression in brackets in equation (5) is zero and equation (5) reduces to equation (1). Again, the 'swing' voters will receive larger block grants.

In Albania, as in many places, parties are not equally popular. It is realistic for us to focus on cases in which one party has greater support, independent of their grant allocation choices. We'll assume here that party A is more popular: $p^o > q^o$. In this case, communes favoring party A more popular: strongly, *ceteris paribus*, will receive a larger block grant.[7] Holding all else equal, in this case, implies that communes are equidistant from $x=0$. Pairing two communes, one that favors party A to the same extent that another favors party B, the one favoring party A will receive greater resources.

Lindbeck and Weibull provide an intuitive (heuristic) explanation for this result. Rewriting the probability of A winning the election as $_A = Pr[\ e_i > n/2] = Pr[\ _{j\ I}\ e_j > n/2] + Pr[\ _{j\ I}\ e_j = n/2]p_i$, we see that Party A cares about individual i only when he or she is a marginal voter. In that case, increasing the probability that i votes for the party will be weighted by the probability of a tie resulting, in the absence of *i*'s vote. This probability is higher in cases in which i is a bigger supporter of the party (and so is missed more when absent).

We test for partisan reward for political support by rewriting (5):

[7] Aranson, Hinich and Ordeshook (1974) examine cases in which maximizing expected plurality and maximizing the probability of winning in a plurality system lead to equivalent policy choice. They prove this for cases in which the error in forecasting the number of votes received by each party is independent of the policy choice. This is not satisfied in the model here: variance in the forecast error = $(1/n^2)\Sigma\ p_i\ (1-p_i)$, where p_i depends upon the policy choice. Aranson et al present results in which they do not rely on this independence, but in those cases they assume that the parties are equally popular, consistent with the results presented here.

$$X_k = [/ (f_i(0) \Sigma p_j^o q_j^o + (p_k^o \bullet q_k^o) \Sigma (p_j^o - q_j^o) / 4)] \; n_k \bullet \; _k n_k .$$

(6)

We will proxy $[1/ (f_i(0)]$ by the commune's absolute distance from 50 percent of the vote for the Democratic party. We will use the percent of the commune voting with the Democratic party in the 1994 referendum on the constitution as our measure p_k^o in equation (6). For our test of this second model, we will regress communes' social assistance budget on the distance from 0.5, weighted by the commune population, and on the percent voting with the Democratic party, weighted by the commune population, and on measures of communes' initial endowments discussed above. Holding constant the distance from 0.5, communes with a stronger vote for the Democratic party should receive a greater share of the social assistance budget, if the decisionmaker's objective is to maximize the probability of winning.

Before turning to the empirical results in Section IV, we introduce our data and the germane features of the Albanian political system and economy in Section III. (These are the conditions that prevailed through the end of 1996. The political situation in Albania is changing too rapidly in the Spring of 1997 to comment on here.)

Section III. Albanian Political and Economic Institutions

Albania is a parliamentary republic with executive, legislative, and judicial branches. The head of state is a president, elected by the parliament. (In the first round of balloting, a candidate must receive two-thirds of the votes to be elected. If no candidate succeeds in doing so, a runoff takes place between the two candidates who received the most votes on the first ballot. In the runoff election, a simple majority is needed to win.) The president nominates a prime minister and appoints and discharges the cabinet. The

president can put forward legislation, and sign or veto legislation adopted by the legislature. The president held a great deal of power in Albania between 1992 and 1996. It is his reelection that the “decisionmaker” discussed in Section II may be trying to assure.

There are currently two major political parties in Albania. The Democratic Party has held a majority of seats in Parliament since 1992, and the current president (Sali Berisha) is a Democrat. The main opposition party is the Socialist Party, which grew out of the former Communist Party.

Social Assistance

Albania, the poorest country in Europe, began its transition from Stalinist dictatorship to parliamentary republic in late 1990. To support the most vulnerable during the transition to a market economy, the central government set up a block grant program in the second half of 1993. There are currently 145000 families receiving assistance, with 65000 receiving "full" assistance and 80000 families receiving "partial" assistance, with exact payment dependent on the families' other sources of income. The "full" payment is tied to the level of unemployment benefits, and (as of November 1995) was not to exceed 250% of the base level unemployment payment. (At present, unemployment payments are $21.50 per month, and 250% of this is roughly $53.)

Program funds are distributed through the Ministry of Labor, which defines the program's eligibility criteria and monitors its performance. Money in this program is nominally distributed to the communes as block grants. The commune petitions the Ministry of Labor on behalf of families that it determines are eligible to receive assistance, and divides the grant between those eligible once the grant has been delivered.

There are three steps in the funding process. First, families applying for assistance at the commune's Section of Social Assistance must prove that they meet the Ministry of Labor's criteria for

eligibility. They must have in hand certificates documenting their land holdings, their tax payments, their employment status, their automobile ownership, and their pension receipt. The amount of money a family is eligible to receive is based on income, including transfers from the government and remittances from family members abroad, and upon potential income from land and animal husbandry. If a family meets the eligibility requirement for social assistance, the program's administrator adds the family's name to the list of potential recipients. In the next step, the social administrator presents the list to the commune council, which is free to add names to— and strike names from— the list. This may be done, for example, if the council believes some households of equal or greater need than those currently on the list have been overlooked. This list is then sent to the Ministry of Labor where a decision is made over the size of the grant to be given to the commune. The Ministry has little control over the household list, but does determine the size of the commune's award. The Ministry can withhold all social assistance funds from the commune if it believes the commune is in violation of the eligibility requirements. In practice, then, this program is a hybrid, with some features of a block grant and some of a centrally mandated-locally administered program.

Data

Our data come from three sources. The Ministry of Labor provided data on the receipt of social assistance funds for all communes in the country, together with information on commune population and land holdings. The country is divided into 36 districts, which are in turn divided into 315 (rural) communes and 45 (urban) municipalities. Communes contain at least 5000 people, and represent 10 villages on average. Our data come from communes only.

Figure III presents data on commune populations and the number of families in each commune receiving social assistance. There is significant dispersion both in the size of communes, and the number of

families receiving assistance. The dispersion in families treated is mirrored in the total size of the block grant by commune, presented in the left panel of Figure IV. However, population is not the only factor determining the size of the block grant. The right panel of Figure IV presents the dispersion in the average amount of social assistance per family in October 1995, by commune. The median commune receipt per family is roughly 1200 lek per month but, as is apparent in Figure IV, there is a long upper tail, with one commune (Luz I Vogel) receiving 4000 lek per family. Some of this dispersion is due to differences in the size of family land holdings between communes, and some to differences in commune receipt of other government funds, such as unemployment insurance and pensions. However, as we will see below, some of the difference appears to be due to political affiliation.

The Socialist Party in Albania provided data on voting records in the 1992 vote for local government and the 1994 referendum on the constitution (favored by the Democratic party). These two measures represent two independent readings of ideological bias in favor of the Democratic party. The local elections in 1992 were used to elect local commune councils for the first time. The election was held a year before the social assistance program was put in place. The referendum on the constitution did not elect any candidates to office, and provides a second measure of the underlying sentiment toward the Democratic party. These two measures are highly correlated (0.73), as can be seen in Figure V. These voting data were collected at the district level, not at the commune level. As we will see below, these match closely data we have at the commune level for a subset of communes. We will use these district-level data when analyzing the full set of communes in the country.

Our third data set comes from a survey we ran in 49 communes in the Fall of 1996, which we will refer to as the "Community Survey." We asked the commune mayor questions about commune voting patterns, and asked the commune's social assistance administrator questions about the block grant program. The match between the district level voting data (Socialist Party data) for these communes and

the commune level data (Community Survey data) is presented in Figure VI, where the votes for the constitutional referendum of 1994 are plotted from the two sources. There is a strong, positive correlation between these two measures of party bias. In Figure VII, we plot the total social assistance budget reported by commune administrators against that reported by the Ministry of Labor for August 1996. The two data sources agree on the size of the communes' block grants.

We combine the district-level political data with the Ministry of Labor data to obtain one set of estimates on the relationship between politics and block grants. We then compare these results with those obtained from the commune-level voting data and block grant data obtained from the Community Survey.

Section IV. Political Influence in Albanian Block Grants

Without additional assumptions, theory does not provide exact functional forms for equations (3) and (6). Table 1 presents several specifications, and suggests that the results are robust to the specification chosen. The first column of Table 1 presents the results of regressing the total block grant in August 1996 on the total number of families for whom assistance was requested, the commune population (measured in 10000s), and the two measures of political alignment suggested by equation (6). These are a measure of the bias in favor of the Democratic party (here the percent of the commune voting with the Democratic party in the constitutional referendum of 1994, multiplied by the commune population), and the absolute difference between the commune vote and 50 percent, multiplied by the commune population. This regression is run for 312 of the 315 communes in the country. (Population figures were not reported for 3 communes.) We find a positive and significant effect of commune bias in favor of the Democratic party on the size of the block grant received. The magnitude of the effect is large. A one standard deviation increase in party bias (15.44), *ceteris paribus*, is predicted to increase a commune's social assistance by 129,000 lek. This is roughly the size of the median block grant (123,000 lek), and represents 40 percent of the mean grant

received (319,000 lek). The sign of the coefficient on the deviation from 0.5 is consistently negative, as predicted by theory. The apparent lack of significance of this variable is due to its high degree of co-linearity with the percent voting in favor of the Democratic party. (This will be made clear in Table 2.) Taken together, these two highly co-linear variables are jointly significant in all specifications, as can be seen in the f-statistics reported immediately beneath the political variables. The 'kink' at 50 percent of the vote will rule out some alternative explanations of political objective, a point we discuss in greater detail below.

The predicted impact of the commune's bias in favor of the Democratic Party, with the positive effect of aligning more strongly with the party and the negative impact of being far from 50 percent, is plotted in panel 1 of Figure VIII. There, the percent of the commune's district voting with the Democrats is plotted against the predicted impact of the political variables. These are the sum of the coefficients on percent voting with the Democrats, weighted by the commune population (coefficient = 8.36), and the absolute deviation from 50 percent weighted by the commune population (-.178), multiplied by the commune's values for these variables. The marginal increases are greater as one moves from 19 percent to 50 percent of the vote, and smaller thereafter. This is in part due to the negative impact of moving away from 50 percent of the vote, and in part due to the size of the communes far from the 50 percent mark. We compare these predicted values with the relationship in the raw data (panel 2), where the same pattern emerges.

Column 2 of Table 1 presents the results of regressing the amount of assistance received per family against these two political variables, together with the number of families for whom aid was requested, and the commune population. This regression is run for a smaller number of communes, because 40 communes did not request aid. The pattern observed in column 1 emerges again. Holding all else constant, a one standard deviation increase in bias in favor of the Democratic party results in a large increase in award per

family (25 percent of the median award).

In column 3, we regress the log of the total grant received on the log of the total number of families requesting assistance, the commune population, and the two measures of commune party bias. The impact of the political variables is qualitatively and quantitatively similar to what was seen in column 1. A one standard deviation increase in the percent of the commune's district voting with the Democrats, weighted by commune population, is expected to increase social assistance funding by roughly 30 percent, holding all else equal.

The results are robust to the addition of controls for commune family land holding patterns, which should influence the size of grant received. This information is available for a smaller subset of communes, and we re-ran the regression in column 3 for that smaller subset of communes, and present the results in column 4. The results are very similar to those in columns 1 through 3: a one standard deviation increase in party bias leads to roughly a 30 percent increase in the size of the commune's block grant, holding all else constant.

Information on commune land holding is added in column 5, where we control for the number of households in the commune with land per family member in different size classes, and the number of households whose land was taken by the government. (The omitted category here are landless families whose land was not taken by the government.) The results in column 5 suggest that the larger the number of families whose land was taken, the larger the commune's block grant, holding all else equal. The larger the number of families with large farms, the smaller the commune's block grant. Families with very small land holdings have the same impact on the size of the block grant as landless families. These results are consistent with the Ministry of Labor funding formulas. An f-test (not reported) does not reject that the coefficients on land holdings above $500 m^2$ per family member are equal to each other. To increase degrees of freedom, we combine large land holding categories in column 6. These effects do not reduce the size or

significance of the political bias in favor of the Democratic party. If the political variables were simply proxies for the level of poverty —and thus of need—we would expect that the inclusion of these controls would dampen the effect of the political variables. However, addition of these variables has little effect on the size and significance of the political variables.

Results in Table 1 suggest that the political bias of the commune may influence its block grant. The results are robust to functional form, and to the inclusion of the endowment information used by the Ministry of Labor to allocate funds. Results in Table 1 suggest that there is a 'kink' in the effect of the Democratic party popularity at the 50 percent mark. Because this will be of interest in discussion of alternative explanations in the next section, we tested the point at which such a 'kink' is most likely, given the data. Figure VIII presents the R^2s (representing a simple transformation of the likelihood) from regressions in which we allow our measure of a 'swing' commune to be the absolute difference between the commune's vote around a varying x percent of the vote, multiplied by the commune population. The most likely kink point lies between 45 and 50 percent — very close to the 50 percent mark theory predicts.

We explore these results further in Table 2, where results are presented for funding at three different points in time: October 1994, October 1995 and August 1996. We present results in columns 1 to 3 for the impact of the district's referendum vote weighted by the commune population, and in columns 4 to 6 for the absolute difference between the district's vote and 50 percent, also weighted by the commune population. We control for both in columns 7 to 9. The bias in favor of the Democratic party is large and significant in all three years, with and without controls for the deviation of the vote from 50 percent. The size of the effect has been roughly constant from 1994 through 1996.

The Ministry of Labor appears to have more finely honed grants to the communes' endowments. The size of the grant has become more responsive to land holdings over the three year period reported on

here. The number of families who are landless because the government has taken land, and the number of families with large holdings have more pronounced positive and negative effects on the grant in 1996 than they had in 1994. However, this has not reduced the impact on grants of commune leanings toward the Democratic party.

Table 2 also makes clear that the impact of these political variables is not driven by their joint inclusion. Taken separately, distance from being a 'swing' commune, on one hand, and partisan loyalty toward the Democratic party, on the other, are each significant predictors of grant allocation.

Data collected locally through the Community Survey present the same picture. The analysis of these data begins in Table 3, where the log(total monthly social assistance budget) for the commune in the late summer or early fall of 1996 is regressed against the percentage of the commune voting for the 1994 referendum, weighted by the commune population, and against the absolute deviation of the commune's vote from 50 percent, controlling for other information available about the commune. The political variables are the same size as those reported from the first data set and are also significant. These, then, provide an independent check on the results presented in Tables 1 and 2.

The last three columns of Table 3 present results that also control for the sizes of family land holdings within these communes. This information was available from the Ministry of Labor for only half of the communes in the Community Survey. These land holding variables have the same effect here that they had in the larger data set: the number of landless families due to government land control is positively correlated with the size of the commune's block grant; the number of families with larger land holdings are negatively correlated with the size of the block grant (although this effect is not significant here). Once the size of landholdings have been controlled for, it appears that the commune's distance to the capital, Tirane, may be negatively correlated with the size of grant received. (However, this result is not robust to the set of controls used in the regression, because of its correlation with the set of controls.)

Alternative Explanations

The results presented in Figures I and VIII and in Tables 1 through 3 suggest that there is a positive, significant, and robust relationship between bias in favor of the party in control and the size of the commune's block grant. However, this does not rule out the possibility that the correlation is due to some omitted variable that is driving both votes for the Democratic party and the size of the commune's block grant. For example, very poor communes may have voted with the Democratic party in 1994, perceiving it to be a vote for change, and may also receive the largest block grants because they are poor.

Our results in Tables 1 through 3 provide some evidence against this interpretation, in demonstrating the insensitivity of the coefficients on the political variables to the inclusion of land holding variables. We further attempt to control for unobservable commune characteristics that may drive both the commune's voting patterns and its grant receipts by looking at changes in funding over time. The social assistance program was most generous in 1994. The average commune block grant was close to 400,000 lek per month in October 1994. That number had fallen to roughly 300,000 lek per month by October 1995, because of strains on the national budget. Table 4 presents the determinants of changes in the commune's log (social assistance) from one year to the next. This allows us to control for any level differences in poverty between the communes that may have given way to differences in funding. We find that the commune's bias in favor of the Democratic party affects not only the level differences in funding, but also the change in funding over time. In Tables 1 through 3, we could not rule out that poverty was an omitted variable leading to correlation between the commune's vote for the referendum in 1994 and its funding levels in 1994, 1995 and 1996. However, it seems less likely that voting for the referendum in 1994 would be correlated with the change in poverty in the communes between 1994 and 1996. This adds additional evidence that the size of the block grant depends upon the commune's political leanings.

The results presented here also rule out a simple alternative hypothesis on resource allocation. Besley and Coate (1997) provide a model of representative democracy in which voters vote their preferences and candidates, once elected, carry out their most preferred policies. In the Albanian case, this would suggest communes vote for candidates who are like them, and are rewarded with social assistance after the election. This could explain the positive relationship between bias in favor of the Democratic party and increased social assistance funding, but does not explain the 'kink' in funding around the 50 percent mark.

Section V. Conclusions

Results here suggest a fundamental tension in block grant programs. Flexibility in spending money at the local level, the heart of a block grant system, may come at a price. There is greater potential in such a system for the center to allocate funds on a basis other than economic need. This potential arises because block grants programs, by their nature, are not based on fixed funding rules.

There has been acall in the United States to return to state governments many social programs currently funded and administered at the federal level. It seems likely that some of the political pressures at work in the Albanian system could also play a role here.

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Table 1

The Impact of the 1994 Referendum Vote on Funds Awarded to Communes in August 1996

	Dep Var: Total Funds	Dep Var: Funds/Fam Receiving	Dep Var: ln(Total Funds)	Dep Var: ln(Total Funds)	Dep Var: ln(Total Funds)	Dep Var: ln(Total Funds)
Percent district for ref 1994 times commune pop (10000)	8.36 (1.9)	.019 (1.8)	.018 (2.8)	.016 (3.8)	.022 (5.1)	.020 (5.8)
Abs value(pct for ref - 50) times commune pop (10000)	-.178 (0.0)	-.017 (1.1)	-.010 (1.0)	-.018 (2.4)	-.009 (1.4)	-.010 (1.7)
F-test: political variables (p-value)	8.04 (.0013)	8.23 (.0012)	17.13 (.0000)	26.18 (.0000)	21.60 (.0000)	24.72 (.0000)
Total families in commune requesting assistance	1.04 (9.2)	-.001 (2.7)	--	--	--	--
Log(total families) in commune requesting assistance	--	--	.923 (38.3)	.938 (32.3)	.873 (15.2)	.903 (29.1)
Commune population (10000s) Jan 1993	-284.4 (1.1)	-.186 (0.3)	-.443 (1.1)	-.220 (0.9)	.162 (0.7)	.278 (1.1)
Families without land due to state control of land	--	--	--	--	25.5 (2.8)	23.7 (2.4)
Families holding less than 500 m^2 of land per member	--	--	--	--	-.952 (0.5)	-1.48 (0.6)
Families holding 500-1000 m^2 of land per member	--	--	--	--	-3.23 (1.1)	--
Families holding 1000-1500 m^2 of land per member	--	--	--	--	-1.18 (0.9)	--
Families holding 1500-2000 m^2 of land per member	--	--	--	--	-3.04 (2.5)	--
Families holding 2000-3000 m^2 of land pe member	--	--	--	--	-4.40 (2.2)	--
Families holding more than 3000 m^2 of land per member	--	--	--	--	-3.45 (1.9)	--
Families holding more than 500 m^2 of land per member	--	--	--	--	--	-3.69 (2.1)
Number of Observations	312	273	273	176	176	176
R^2	.7491	.0307	.8946	.8805	.8994	.8970

Notes: T-statistics are reported in parentheses. Heteroskedasticity consistent standard errors are reported, allowing for clustering within districts. Variables on families owning land are divided by 10000. (Omitted category is landless families whose land was not taken by the government.) A constant term is estimated but not reported.

Table 2
The Impact of the 1994 Referendum Vote on Commune Social Assistance Block Grants
Dependent Variable: Log(Total Funding for Commune)

	Aug 1996	Oct 1995	Oct 1994	Aug 1996	Oct 1995	Oct 1994	Aug 1996	Oct 1995	Oct 1994
Percent district for ref 1994 times commune pop (10000)	.024 (6.4)	.033 (6.7)	.018 (4.2)	--	--	--	.020 (5.8)	.032 (3.8)	.013 (2.7)
Abs value(pct for ref - 50) times commune pop (10000)	--	--	--	-.028 (4.7)	-.032 (4.1)	-.025 (3.9)	-.010 (1.7)	-.004 (0.3)	-.012 (1.6)
F-test: political variables (p-value)	--	--	--	--	--	--	24.72 (.0000)	30.34 (.0000)	12.13 (.0001)
Log(families) in commune receiving aid	.898 (29.8)	.976 (36.0)	.981 (29.8)	.895 (26.8)	.958 (19.9)	.977 (35.4)	.903 (29.1)	.978 (34.0)	.985 (32.5)
Commune population (10000s) Jan 1993	.031 (0.1)	-.623 (2.5)	-.089 (0.3)	1.23 (3.9)	.982 (5.8)	.885 (4.1)	.278 (1.1)	-.534 (1.2)	.235 (0.8)
Families without land due to state control of land	23.7 (2.3)	7.10 (1.3)	8.40 (1.4)	23.5 (2.4)	7.53 (1.4)	8.24 (1.6)	23.7 (2.4)	7.10 (1.3)	8.64 (1.7)
Families holding less than 500 m^2 of land per member	-1.25 (0.5)	-1.56 (1.0)	-1.28 (0.7)	-.518 (0.2)	.286 (0.2)	-.723 (0.5)	-1.48 (0.6)	-1.63 (1.0)	-1.51 (0.9)
Families holding more than 500 m^2 of land per member	-3.79 (2.2)	-2.18 (2.5)	-1.27 (1.1)	-3.19 (1.9)	-1.27 (2.3)	-.836 (0.9)	-3.69 (2.1)	-2.15 (2.5)	-1.18 (1.1)
Number of Observations	176	170	165	176	170	165	176	170	165
R^2	.8963	.9300	.9005	.8907	.9157	.8988	.8970	.9300	.9015

Notes: T-statistics are reported in parentheses. Heteroskedasticity consistent standard errors are reported, allowing for clustering within districts. A constant term is estimated but not reported. Variables on families owning land are divided by 10000. SOURCES: Data on land holdings and award receipt by commune were provided by the Ministry of Labor; political variables were provided by the Albanian Socialist Party.

Table 3
Total Social Assistance Funds Awarded to Communes
Community Survey Data
Dependent Variable: Log(Total Social Assistance Funding) in month prior to survey

Pct commune for ref 1994 x commune pop (10000)	--	.018 (2.2)	--	.015 (1.8)	.017 (2.4)	--	.013 (1.6)
Abs value(pct for ref - 50) times commune pop (10000)	--	--	-.021 (1.8)	-.014 (1.2)	--	-.023 (1.9)	-.012 (0.9)
F-test: political variables (p-value)	--	--	--	3.26 (.0487)	--	--	3.36 (.0591)
Log(families) in commune receiving aid	.823 (5.8)	.799 (5.8)	.837 (6.0)	.811 (5.9)	.777 (4.0)	.775 (3.8)	.772 (4.0)
Travel time to Tirane	.024 (0.6)	-.001 (0.0)	.035 (0.8)	.007 (0.1)	-.134 (2.1)	-.083 (1.2)	-.113 (1.7)
Commune population (10000s) Jan 1993	.295 (0.8)	-.676 (1.2)	.434 (1.2)	-.423 (0.7)	-.837 (1.5)	.066 (0.1)	-.627 (1.0)
Families without land due to state control of land	--	--	--	--	70.0 (4.5)	68.3 (4.1)	68.9 (4.4)
Families holding less than 500 m^2 of land per member	--	--	--	--	3.53 (1.1)	5.60 (1.6)	4.48 (1.3)
Families holding more than 500 m^2 of land per member	--	--	--	--	-1.58 (0.6)	.428 (0.1)	-.377 (0.1)
Number of Observations	48	47	.47	47	26	26	26
R^2	.5921	.6377	.6227	.6501	.8603	.8466	.8671

Notes: T-statistics are reported in parentheses. A constant term is estimated but not reported. Variables on families owning land are divided by 10000. SOURCES: Data on land holdings were provided by the Ministry of Labor; political variables, travel time to Tirane and commune award levels were collected as part of the Community Survey.

Table 4
Change in Commune's Social Assistance Awards
Log First Differences

	Community Survey Data Log Funding 1996 - Log Funding 1995				Ministry of Labor Data
Pct commune for ref 1994 *times* commune pop (10000)	--	.014 (2.2)	--	.017 (2.8)	.003 (1.4)
Abs value(pct for ref - 50) *times* commune pop (10000)	--	--	.010 (1.0)	.017 (1.9)	.001 (0.2)
Log(families) in commune requesting aid	.033 (0.3)	.013 (0.1)	.029 (0.3)	.001 (0.0)	--
Change in Log(families) requesting aid: year t - (t-1)	--	--	--	--	.755 (10.9)
Travel time to Tirane	-.030 (0.9)	-.052 (1.5)	-.034 (1.0)	-.064 (1.8)	--
Commune population (10000s) Jan 1993	.036 (0.1)	-.659 (1.6)	-.037 (0.1)	-.956 (2.2)	-.004 (0.0)
Families without land due to state control of land	--	--	--	--	6.07 (2.0)
Families holding less than 500 m^2 of land per family member	--	--	--	--	-.493 (0.5)
Families holding more than 500 m^2 of land per family member	--	--	--	--	-.768 (1.6)
Number of Observations	44	43	43	43	310
R^2	.0398	.1495	.0659	.2252	.5058

Notes: T-statistics are reported in parentheses. A constant term is estimated but not reported. In column 5, the dependent variable is the first difference in log(total funding) for 1996 - 1995 or for 1995 - 1994. An indicator for year = 1995 is included in this regression reported in column 5, and heteroskedasticity consistent standard errors are reported allowing for clustering within districts. In column 5 the first right hand side regressor is the percent voting for the Referendum 1994 in the commune's district, multiplied by the commune population, and the second right hand side regressor is the absolute difference (Percent of commune's district voting for the Referendum 1994 - 50 percent) multiplied by the commune population. Variables on families owning land are divided by 10000.

Figure VIII A Comparison of the predicted and observed impact of political variables