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Universalism and targeting: The distribution of federal aid monies

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UNIVERSALISM AND TARGETING: THE DISTRIBUTION OF FEDERAL AID MONIES

by

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ABSTRACT

The behavior of national legislators has made for interesting studies relating election goals and game theory strategies to the formation of coalitions on policy packages. These theories regarding behavior can become most useful when linkages are made to policy consequences. This study examines federal domestic aid programs in the 1980's in an attempt to identify the trade-offs between universalism and targeting as applied to federal policy outcomes. Tests for the presence of these outcomes are performed and the nature of the relationship between them is explored. The results show some support for the geographic widening of programmatic aid as a program ages, depending upon program characteristics. In addition, little progressive targeting is found to occur across programs, while this varies depending upon the type of aid recipient.
The behavior of national legislators has made for interesting studies relating election goals and game theory strategies to the formation of coalitions on policy packages. These theories regarding behavior can become most useful when linkages are made to the policy content consequences. This study examines federal domestic aid programs in the 1980's in an attempt to identify the trade-offs between the concepts of universalism and targeting as applied to federal policy outcomes. After tests for the presence of these outcomes are performed, the nature of the relationship between them is explored.

LITERATURE REVIEW

UNIVERSALISM:

The Congressional politics associated with the disbursement of federal domestic aid have been the subject of countless studies in both political science and economics. Formal game theory suggests that legislators will form minimum-winning coalitions in the realm of federal aid allocations (Riker, 1962). This is due to the distributive nature of federal aid. The benefits of aid to districts are necessarily geographic, therefore concentrated; however, the costs are diffuse since the national coffers foot the bill. Thus, as long as a legislator's district is included in the aid allocation, he or she will garner benefits by being in the winning coalition since costs to his or her district are small. The coalition will be only big enough, however, to push the aid package through the legislature (i.e. the minimum needed to win), so the benefits are maximized among the supporters of that aid package.

However, the empirical reality of oversized coalitions presents hard evidence against the theory of this type of behavior. Many votes are universalistic in nature and often do not even require roll call votes (Mayhew, 1974:112). In addition, the policy consequences are not those that would be expected if minimum-winning
coalitions are the norm. Universalization has been documented in particular policy areas (see Ferejohn, 1974, and Rundquist, 1973). The aid packages give everyone a bit of the action; the magnitude of the aid does not seem to matter, just as long as nearly all districts receive some monies.

Several studies have been undertaken to explain the over-sized coalitions which appear to be a strategic mistake as far as the legislators are concerned. Mayhew (1974) refers to a concept called 'universalism', the 'something for everyone' phenomenon that pervades legislative behavior in regard to policy-making. He notes that "...the best way for members to handle the particular is to establish inclusive universalistic standards. Hence on particularized benefits, there is no reason to expect to find minimal winning coalitions" (Mayhew, 1974:114). Weingast (1979) and Shepsle and Weingast (1981) model the theory and its implications. They posit that the reason for this coalitional behavior is the uncertainty involved in the process of aid allocation. Legislators have imperfect information as to which coalition will form, whether he or she will be a member of that coalition, and whether or not the programs of importance to the member will be reauthorized in the next time period. To hedge against this uncertainty, legislators would rather be certain of aid and therefore prefer nearly unanimous coalitions. As applied to federal aid programs in particular, the universalism theory stemming from legislative behavior can be extended to policy outcomes. This extension predicts that programs will be broadly-based - allocating pieces of aid to almost all of the districts.

Stein and Bickers (1989) extend Shepsle and Weingast's (1981) universalism argument as applied to policy implications to allow for the evolution of programs over time. They call this concept 'selective universalism' and assert that the process is dynamic. Their argument is that programs start as targeted programs intended for
a narrowly defined constituency and command only a small amount of legislative support (e.g. a minimum-winning coalition). Over time, however, the program will need additional support to survive reauthorization of funding. Depending upon budgetary constraints and the demand for the program over time, the program then undergoes programmatic changes in structure to allow for a wider group of beneficiaries so that more legislators will lend support to it. The point is that almost every jurisdiction gets 'a piece of the action' in return for the support of a nearly unanimous coalition of legislators. This universalistic coalition ensures the longevity of the program, even in the face of uncertainty.

TARGETING:

These arguments have implications for targeting the allocation of aid to certain special constituencies. The term 'targeting' can have different interpretations. The concept may be a general one, focusing on the benefits of aid, not on the source of the funds. In this sense, a program that is targeted has some strict parameters that restrict beneficiaries to a narrow group of individuals, organizations, or collection of individuals. Targeting may have other varied objectives. Targeted aid may be used to induce certain groups to engage in a particular kind of behavior (e.g. to integrate public schools) or to allocate funds on the basis of different needs. These needs may be manifested in various ways. One measure of need might be the capacity of a group, community, or locality to apply for and receive aid. On the other hand, cities with weak tax bases, businesses owned by minorities, or areas susceptible to earthquakes are specific narrow groups which might be targeted by federal aid programs. Finally, aid may be targeted in the redistributive sense; individuals or communities with low indicators of economic health are eligible for financial aid and redistribution of wealth. This concept of
progressive targeting implies an interest in both the benefits and sources (costs) of targeting, or the 'Robin Hood' notion of taking from the rich and giving to the poor. Of course, targeting is not synonymous with redistribution of federal aid in that wealth is not necessarily directly transferred from the rich to the poor; however, there should be an element of negative (redistributive) targeting in any program that receives funding from a progressive federal income tax and gives that money to narrow needy groups. This redistributive concept of targeting is the one used in this paper. Problems with this definition are considered later in the discussion.

The area of redistributive programs has been one which has prompted a particular type of theory regarding federal aid. Some ideas stem from the study of the provision of public goods. Theorists like Theodore Lowi (1964) and Paul Peterson (1981) break the provision of these goods down into categories, each with different characteristics. Lowi maintains that different kinds of policies are indicative of different kinds of politics, while Peterson links the cost/benefit ratio of each type of policy to its potential attractiveness to local governments.

Of Peterson's categories of public goods, it is the redistributive policy area that becomes problematic for certain levels of government. Peterson asserts that since the benefit/cost ratio of redistributive policies is by definition less than one, local governments do not find it a valuable type of policy to follow. Redistributive policy has very concentrated benefits - typically for the poor. However, the poor contribute least to the revenues of the city. Peterson asserts that the reason that cities cannot follow this type of policy is because the major contributors to the tax base - businesses and the wealthy - can move out of the community if they feel that too much of their money is being spent on redistributive policies. The idea involves voting with one's feet. The logical conclusion of Peterson's argument is that local
governments will not be effective in the implementation of redistributive policy, if
they even attempt it at all.

A similar assertion has been made by Musgrave (1959) and Oates (1972). They maintain that because of mobility and the free-rider problem, decentralized provision of public goods is inefficient. As Peterson noted, businesses or citizens can move from one community to another if they do not like the bundle of public goods they receive in that community (reminiscent of Tiebout's (1956) theory of local expenditures). This is related to the free-rider problem of letting others carry the load of contributing to redistribution.

For Musgrave and Oates, then, the answer is a federal or centralized provision of redistributive policies. Oakland (1938) recognizes that the federal government can more efficiently redistribute income because the local redistribution carries with it external diseconomies. Musgrave and Oates' argument attributes the superior ability of the federal government to redistribute wealth to the inability (or relative difficulty) of citizens and companies to 'vote with their feet' by leaving or entering the United States with labor and/or capital to avoid contributing taxes to redistributive policy.

From these analyses, then, the federal government should ideally take over the provision of redistributive policies. The local governments cannot and will not (according to Peterson) engage in redistributive policies, while the federal government can enact these policies because it will not lose resources in terms of mobility or free-riders.

However, the previously discussed concept of selective universalism as applied to federal aid allocations would seem to indicate that even if targeting of programs to needy constituencies exists at the federal level at all, it decreases over time as the program becomes open to a wider and wider group of beneficiaries\(^1\).
Anagnoson (1978) also notes that redistributive programs over time seem to exhibit the characteristics of distributive programs. His study implies that at least at the individual program unit of analysis, targeting for redistributive purposes at the federal level is not as efficient as Musgrave and Oates would expect.

These different theories and the subsequent work done in relation to them have produced tests with varying results. Rich (1983) finds that individual programs may exhibit targeting. Furthermore, he notes that "...Congress has become more interested in targeting and less interested in pork-barrel"ing" (1983: 208). On the other hand, Stein and Bickers' (1989) selective universalism argument predicts that individual programs will exhibit less and less targeting as they age and become 'watered-down'.

Finally, there is some ambiguity regarding whether or not universalization and targeting should be thought of as analytical opposites. On the one hand, the idea that everyone gets an equalized piece of the pie from broad programs (i.e. non-restrictive), seems quite incompatible with targeting. Conversely, it is possible that the two states of nature may be able to coexist. Stein and Bickers (1990) indicate that this may be a function of fiscal conditions. They propose that during periods of budgetary constraint, less targeting will occur. In this zero-sum game, legislators are competing for the same aid since fiscal conditions may require cuts in some allocations. They also posit that those programs that do target will not universalize and will be eliminated from existence. The possibility of simultaneous targeting and universalism is addressed at length below.

**HYPOTHESES**

**UNIVERSALISM:**
The first set of hypotheses tested are ones regarding the presence of universalization. For the remaining part of the paper, the use of the term 'universalism' refers primarily to Stein and Bickers concept of 'selective universalism' as opposed to the static version used by Shepsle and Weingast. As explained in the data section below, the tests will be performed at the county level of analysis.

The first hypothesis is that if universalization is occurring, then the mean federal aid allocation for a program to each jurisdiction is a function of: one, the age of the program; two, the type of assistance; three, the presence of matching requirements; and four, the mean allocation associated with the previous year. Firstly, the age of a program is a surrogate measure for reauthorization of a program. Therefore, the mean aid allocation of a program is expected to decrease as the pie is divided into more and more pieces over reauthorization periods.

The program's type of assistance is also important. Stein and Bickers' (1989) work indicates that different types of programs have different life expectancies. For example, programs with strict structural attributes are expected to depress the tendencies toward universalization. Therefore, programs which are discretionary, like project grants and cooperative agreements, are by nature more restrictive in their aid allocations and more volatile. This may result in a slower rate or lower level of universalization. Entitlement programs, on the other hand, may exhibit a faster rate of universalization since they are, by definition, open to more beneficiaries and are intended to give comparable amounts of aid to large numbers of beneficiaries.

There is another structural attribute of programs which may affect the universalization process as measured by the mean aid allocations. This is the presence of matching requirements. Matching requirements refer to the amount of
money (or other resources) that a recipient is required to contribute to the project and/or purpose for which he is receiving aid. For example, a state may receive money to build a reservoir; however, the aid is contingent upon the state 'matching' the federal award (e.g. a fifty per cent contribution). This type of program attribute is expected to restrict access to program monies. Therefore, the presence of matching requirements should have a negative effect on allocations.

These two structural attribute variables are also expected to have an interaction effect with the age of the program. In other words, the presence of either type of program attribute is not only expected to affect the starting level of the aid allocation (intercept effect), but also to have an influence on the rate at which the allocation changes (a slope effect). Therefore, interaction variables are used to allow matching requirements and discretionary aid to interact with the age variable. As with the other two versions of these variables, the relationship is expected to be negative since the presence of either type of attribute should depress the universalization effect of the age of a program. (The net effect of age on the allocation will still be positive; the effect of these two variables is simply expected to make that age effect less positive.)

Finally, the mean allocation associated with the previous year is also included as a lagged endogenous variable. It would be unrealistic to assume that the present year's allocations are not significantly related to those of the previous year. Most work on Congressional budgetary decisions concludes that incrementalism is the prevailing phenomenon in the allocation of funds (see Wildavsky, 1964). Therefore, it is only logical to include the variable in the analysis; in fact, universalism also predicts relationships between successive reauthorizations of funding. The final relationship with the lagged variables is not of theoretical interest, but is necessary in the analysis of budgetary processes. This, of course, presents the violation of
basic regression assumptions, but this problem is preferable to leaving such an important variable out of the analysis.

The second hypothesis regarding universalization posits that the coefficient of variation for a program's allocation is a function of basically the same variables listed above: the program's age, the type of assistance, the matching requirements, the percentage of jurisdictions receiving monies, and the coefficient of variation observed in the allocations from the previous year. Again, the age of the program is a measure of reauthorization success. As a program gets older, the selective universalization theory would predict that the variation among allocations will decrease. Remember that the point of the expanding base of programs is that everyone gets 'a piece of the action'. The size of the allocation is of lesser importance, otherwise legislators would not allow more members in the coalition than is necessary (preferring a minimum-winning coalition to maximize benefits). Instead, uncertainty is such that the legislator's main concern is to get a certain allocation of aid rather than attempting to maximize gains at some risk of getting none. Therefore, the coefficient of variation should reflect an equalizing of pieces as a program ages (i.e. it should decrease).

The structural attributes of a program (discretionary types of assistance and matching requirements) are also expected to be related to the variation across allocations. Again, the presence of these kinds of parameters in a program are restrictive. However, they are not necessarily restrictive in a way that increases variation in the same way that they increase mean allocations. Instead, decision rules associated with discretionary programs allow a great deal of subjectivity in the allocation of aid. Therefore, the aid allocations are expected to vary widely as the bureaucrats making aid decisions are allowed a good deal of discretion. These
programs are not the kind of programs that entitle all of the recipients to a set amount of aid. On the other hand, the presence of matching requirements does not necessarily have these same discretionary implications. This structural attribute can still be seen as a restrictive measure, one that would probably result in the equalization of allocations; therefore, a negative relationship is still expected with this variable. In addition, the variables that allow for interaction with age are also included in this test. The relationships are expected to be in the same direction as the ones just mentioned without the age interaction.

The percentage of jurisdictions receiving monies should also affect the extent to which the allocation sizes are varied. As the number of recipient jurisdictions increase due to universalization of the program, the pieces should become more equalized. In other words, as the ‘pie’ is cut into more pieces for more recipients, the pieces should become increasingly equal. In addition, the inclusion of this variable can be seen as a control for the ‘spikes’ in the data; this is a result of the high number of zeros in the data for jurisdictions receiving no aid from a particular program.

The coefficient of variation from the previous year of allocations is included as a lagged endogenous variable for the same reasons mentioned in the previous discussion of the lagged endogenous variables.

The final universalization hypothesis tests for the variables which affect the number of recipient jurisdictions (relative to all jurisdictions). The number of jurisdictions receiving aid from a program is expected to be a function of the program’s age, its assistance type, and the presence of a matching requirement. The increasing age of a program, indicating successful reauthorizations, should provide for increasing numbers of recipient counties as the program universalizes such that
it is available to a broader range of constituencies. Lastly, the two variables measuring strict structural attributes are again expected to depress the number of recipients since they are deterrents to large aid amounts and to aid applications. Again, the structural attributes are expected to interact with age to produce a change in the slope effect in the same direction.

TARGETING:
The second set of hypotheses tested are those regarding the targeting of federal aid allocations.

First, if targeting of aid to needy constituencies is occurring, then the total aid allocations for a jurisdiction are related to the jurisdiction's median income. The expected relationship is negative if progressive targeting is occurring (aid allocations are larger in jurisdictions with lower median incomes). If regressive targeting is occurring, a positive relationship will result. This measure of targeting may be controversial since income is only one indication of need and since all programs are not necessarily intended to be redistributive in this fashion.

Therefore, there may not be a reason to expect that the entire set of federal programs should exhibit redistributive targeting. All programs are obviously not intended to be 'Robin Hood' reallocations of wealth. However, the independent variable used (median income) can be interpreted as one that taps into many different aspects of need (e.g. capacity for pursuing aid, need for additional infrastructure aid, etc.).

On the other hand, a control for this problem can be employed. Although a test is performed on the entire set of federal aid programs, in a perhaps more rigorous test of REDISTRIBUTIVE targeting, the analysis is also conducted solely on the programs that are judged to have redistributive intentions. This subset of
programs have been chosen based upon the content of the listed intentions and application process of each Catalog entry - i.e. the program is deemed to have some kind of income test for the individual, group, or community which applies for aid. The expectation is that progressive targeting will be more strongly exhibited in the subset of programs that employ income level criteria for aid allocations.

TARGETING IN THE FACE OF UNIVERSALISM:

These tests may seem straightforward in terms of what relationship is expected. The real question may instead relate to how the results of the universalization tests and the targeting tests relate to one another. There are several possibilities which may result, the implications of which are discussed here before proceeding to the tests.

First, the results may indicate the strong presence of one of the patterns and the strong refutation of any evidence for the other. If the tests for universalization net strong results and those for targeting do not, then it seems that the two can be thought of as analytical opposites. The implication is that universalization processes preclude targeting to the needy constituencies (in redistributive terms, at least). However, if the findings indicate the opposite results, perhaps the universalization argument is invalid, and the federal government is indeed efficient in the area of redistributive policy.

On the other hand, the tests are not expected to be so cut-and-dry in their implications. The more probable outcome is one which indicates mixed results. This possibility may be attributable to two major sources.

The first source has been addressed previously. The signs of targeting in the allocation of federal aid may not be observed in the analysis since not all programs are intended to be redistributive. In addition, some programs that have
redistributive goals may be targeted to a specific group of needy people within a jurisdiction that is not so needy itself (as measured by median income). This possibility is controlled for by testing the subset of programs as mentioned above.

On the other hand, if the results for universalization and targeting are not strongly indicative of an inverse relationship, there may be a different reason - one for which is much more difficult to control. Perhaps the definition of targeting needs to be reevaluated. Many theories may ignore the fact that there is often a 'middle-man' in the process of targeting federal aid programs (see Rich, 1983). Oates maintains that the federal government will redistribute better because it is centralized. However, his theory does not account for the fact that federal monies are often routed through sub-national units of government like the state or city. It is possible that this routing of money affects the ability of the federal government to target specific groups. The solution may lie in the principal-agent model. The federal government (principal) may very well attempt to target money to specific groups, but the state (agent) has different interests than those of the federal government. This is because the state is also a principal with its own agent, a smaller jurisdiction (the county in this analysis). Chubb (1985) examines this model by looking at different responses to incoming federal monies. The city, according to Chubb, may actually substitute federal money for their own in terms of redistributive policy. In this case, the targeting goals of a certain sum of money may not be fulfilled by the agent at all. Or, on the other hand, the money may actually be stimulative. In the principal-agent model, then, the problem of the principal (the federal government) is to give the agent (the state which is in fact also a principal) the incentive to carry out the redistributive goals of the federal government.

Presumably, one way to get the agents to carry out the intended goals of the programs (i.e. the goals of the federal government) is to allow for structural
attributes that force the agents to give the money to the intended recipients. As mentioned earlier, these attributes include matching requirements for the local unit of government and strict narrow determinants of recipient eligibility. There is good reason to expect that the federal government should not trust the sub-national units to carry out the redistributive goals of programs. Peterson's (1981) cost/benefit analysis posits that local units of government will not see redistributive policies as being in their best interest. Therefore, since many federal monies pass through these sub-national units, a program with redistributive goals may need strict structural attributes to force redistributive outcomes.

If there is a independent effect of the structural attributes of the program, then perhaps there is a solution to the principal-agent problem, namely the use of state and/or counties as intermediaries in the distribution of the federal largess. However, this possibility is difficult to test. This is because the data are not available to indicate which federal monies go through the state and what the state does with these particular monies. Therefore, it is hard to say whether or not any relationships (or lack thereof) at the county level are the results of states being the 'middle-man'.

The hypothesis derived from this discussion would posit that the amounts of universalization and targeting (for the same program monies) will be different at the state level as compared to the county level. Unfortunately, the problem mentioned above will not allow for testing the universalization differences with this data. The only test available with this data set is one which can only hint at the answer to this question. If the federal government trusts the state to target needy areas, then programs that are intended to be redistributive may provide more aid (relative to other programs) to the states than other levels of government. If, on the other hand,
most redistributively-intended programs send monies directly to the lower levels of government or to other levels of recipients, then the federal government may be trying to skip the 'middle-man'.

Therefore, the analysis should control for the level of recipient receiving monies from programs with redistributive goals. A test is devised which examines the effect of a program with redistributive goals on the amount of aid that goes to each level of recipient. The programs are split into groups that indicate to which recipient level a program sends a majority of its funds. Then a simple bivariate regression is performed to determine the effect of a redistributively-intended program on the percentage of money that each level of recipient receives from that program.

Finally, to further examine the amount of redistributive targeting across levels of recipients, the original median income relationships are examined. By again grouping the programs according to the level which receives a majority of the funds, the difference in redistribution results may be observed, comparing all programs to the subset of programs with redistributive goals.

**DATA**

The data set used in the analysis includes the entire population of counties (n=3138) in the United States in the form of a pooled cross-sectional time series. The data set providing the aid allocation information (in current 1982 dollars) is the FAADS data set, covering the period 1982 to 1988\(^3\). Some of these programs allocate monies to every county, while a few send all funds to a single county. An analysis at the county level is not ideal, especially in conjunction with the universalism argument as applied to legislative behavior. Legislators, of course,
attempt to procure funds for the political entity that elected them - the Congressional district, not the county. However, the data set only provides county level information, without breakdowns by Congressional district. Therefore, a Congressional district analysis would require the same approach that Stein and Bickers (1990) use, dividing funds that extend across districts proportional to the population in each county. Obviously, there are advantages and disadvantages to each approach; this analysis employs the county level data.

In addition, data on the subset of programs with redistributive goals are utilized. The data for this section are coded directly from the Catalog of Federal Domestic Assistance (CFDA) for the years in question. Any program using an income test or specifying eligibility for only economically depressed areas has been coded as income-targeted (i.e. programs with redistributive goals). Although these data are coded subjectively from the program documentation in the Catalog, the percentage of agreement across coders is .985.

The age variable is calculated by using the year in which the program first appeared in the Catalog as the program's inception date. Since the Catalog only appeared in 1965, programs that existed prior to that time may have ages that are underestimated. Any reorganization of a program causes it to be considered as a new program as of that reorganization date - the same method employed by Stein and Bickers (1990).

The presence of a program matching requirement presents two alternatives measures, each for which there is a theoretical case. It is possible that as the percentage of money that is required as a contribution from the recipient increases, less jurisdictions will receive aid (i.e. the variable would be a continuous variable measuring the percentage of matching monies required). However, it is also possible that simply the presence of any sort of matching requirement is enough of a
deterrent to keep the number of recipients down, regardless of the relative size of
the requirement (therefore, the variable would be dichotomous). In a previous
study (Heitshusen, 1990), both types of matching requirement variables were used.6
The continuous variable was found to be insignificant in all cases. Alternatively, the
dichotomous variable had significant effects; therefore, only it is used in this
analysis.

The median income measure for counties is obtained from 1980 census data.
Finally, the groupings of programs by recipient level involved assigning each
program to a level if fifty per cent or more of that program’s allocations went to that
recipient level. These recipients levels are: states, counties, cities, special districts
(e.g. regional entities, irrigation districts, railroad districts), schools (including all
higher education), Indian tribes, non-profit organizations, individuals, and profit
organizations.

MODELS

UNIVERSALIZATION:

In the test for universalization, three models are used:

\[ M_1: Y_1 = a + Y_{1t-1} + (X2) + (X4) + (X5) + (X6) + (X7) \]
\[ M_2: Y_2 = a + Y_{2t-1} + (X2) + (X3) + (X4) + (X5) + (X6) + (X7) \]
\[ M_3: Y_3 = a + Y_{3t-1} + (X2) + (X4) + (X5) + (X6) + (X7) \]

where

- \( Y_1 \) = mean aid allocation across recipient counties for that
  program
- \( Y_2 \) = coefficient of variation for the aid across all
  counties
- \( Y_3 \) = percentage of counties receiving aid from a program
- \( Y_{1t-1}/Y_{2t-1}/Y_{3t-1} \) = lagged endogenous variables
- \( X_2 \) = age of program
- \( X_3 \) = percentage of counties receiving aid from a program
- \( X_4 \) = dichotomous variable for discretionary aid (1) and non-
X5 = discretionary/entitlement aid (0)
X6 = dichotomous variable representing the presence (1) or absence (0) of a matching requirement
X7 = interaction variable between discretionary aid (1) and non-discretionary/entitlement aid (0) and age of the program
X8 = interaction variable between the presence (1) or absence (0) of a matching requirement and age of program

To further clarify the tests of the universalization models, the basic relationships which are expected are reviewed here before the findings are presented.

**Expected Direction of Universalism Relationships:**

<table>
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<th>lagged dep var</th>
<th>age</th>
<th>discreet match</th>
<th>dis*age</th>
<th>match*age</th>
<th>%recip</th>
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</thead>
<tbody>
<tr>
<td>(M1) mean</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(M2) c.v.</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>(M3) #cntys</td>
<td>+</td>
<td>+</td>
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</tr>
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</table>

In the first model, the lagged endogenous variable is expected to have a strong positive relationship with the present mean allocation measure for recipient counties - incrementalism at work. Also, as the age of a program increases, the mean allocation for recipients will decrease, because more recipients are expected to get a 'piece of the pie'. The presence of strict structural attributes (the remaining independent variables) should decrease the mean allocation; therefore, the relationships are expected to be negative.
All relationships between the independent variables and the coefficient of variation for the allocation are expected to be negative, save the lagged endogenous variable and the ones measuring the effect of discretionary programs on the coefficient of variation. As the program gets older (and produces more recipients), the pieces should become more equalized across recipients, producing a negative relationship with age. In addition, programs with matching requirement programs are restrictive; therefore, allocations should be equalized over time. On the other hand, the subjective decision rules associated with discretionary programs allow for a higher level of variation among allocations.

In the final model, the age variable is expected to be strongly positively related to the number of counties receiving aid monies. Also included in this model are the discretionary aid and matching requirement variables. Again, the presence of these kind of programs should have a negative effect on the number of counties receiving money.

One expected problem involves the structural attribute variables. The matching requirement and discretionary aid variables might be collinear. This is because matching requirements are used in conjunction with discretionary aid programs more often than with entitlement programs. (Only 19.6% of entitlement programs have matching requirements while 44.7% of discretionary programs do.) Therefore, the models were run twice - once excluding just the matching requirement variables and once excluding the discretionary variables, to better determine their effects and for easier interpretation of results.

The universalization tests are run as a pooled cross-sectional time series over the seven year period. Time series analysis, of course, presents problems of autocorrelation. The autocorrelation would cause overestimation of t-ratios (resulting in overconfidence in one's models), and in this case, would most likely be
positive autocorrelation. To correct for this, the lagged endogenous variable is included as an independent variable. This inclusion, in return, will probably produce a great deal of bias in the parameter on that lagged variable, usually a spuriously high bias. Since the lagged variable is of little theoretical importance, this problem is acceptable. Finally, using this type of time-series data will probably produce heteroscedasticity. This problem is not too serious in its implications since the inflated standard errors that it causes result in conservative hypothesis tests, thereby increasing the chance of accepting the null hypothesis.

TARGETING:

The tests for targeting are a bit simpler. Because of the differing perspectives on the targeting issue already discussed, two different targeting analyses are conducted, one on the entire set of programs and another on the programs with redistributive intent\textsuperscript{7}.

The test, then, involves this simple model:

\[ M4: \text{aid received} = \text{intercept} + \text{median income (of the county)} \]

However, as scanning the raw data indicates, the relationship can not be expected to be linear. This is because of the large variation in the values of the dependent variable (many zero observations with otherwise large values). Therefore, the model is tested as a semi-log model in which the dependent variable is the natural log of the aid allocation. As noted before, a negative relationship indicates progressive targeting, while regressive targeting is signified by a positive one.
This test allows for insight into the problem of redistributive policy at the local level discussed earlier. This involves breaking down the programs by the level of recipient. If a program gives a majority of its aid to one level in a particular year, the program is assigned to that group. Using the results of the regression above, the amount of targeting at different levels of recipients may be observed. Therefore, an examination of these results by level of recipient is also warranted - using both all programs and the subset of redistributive programs.

The other test for redistributive targeting also involves controlling for the different levels of recipients. This test zeros in on the effect of a program with redistributive intent (versus a program without) on the amount of aid that goes to different recipient levels. A simple bivariate regression is run for each level on this model:

M5: % of aid to level = intercept + target (dichot-variable)

The variable target equals one if redistributive intent exists, otherwise it is equal to zero.

FINDINGS

UNIVERSALIZATION:

The results of the universalization tests are varied, some supportive of the selective universalism thesis and some not (see Table I for results).

The one variable displaying consistent expected results is, of course, the lagged endogenous variable. This tells us little, however, about universalism save that mean allocations for recipients increase a small amount year by year - nothing surprising.
Universalization as measured by an increasing number of counties receiving aid is relatively strong. For example, a one year increase in program age causes about fourteen more counties receiving aid from a program. As expected, restrictive discretionary measures and matching requirements interacting with the age of a program decreases the number of counties receiving aid. This model shows that there is at least a geographical ‘widening’ of aid over the life of a program, partially affected by the characteristics of program restrictions.

The other models used to tap into universalization are less supportive, however. Age, a key variable, always nets results in the predicted direction; however, the coefficient is significant in only one model (using the coefficient of variation as the dependent variable). This may indicate that aid amounts vary a bit less as a program ages, but its affect on mean allocation amounts is small or non-existent.

The structural attribute variables also produce mixed results. As noted, the model that utilizes the number of recipient counties is the most fruitful. The interaction variables using the structural attributes and age exhibit significant negative coefficients. This indicates that the presence of these strict structural attributes does depress the slope effect of age on the number of recipients. In fact, the interesting finding is that this interaction almost negates the independent effect of age. In these cases, the amount of universalization that is present is removed if a program has a matching requirement or is of the type that provides discretionary aid.

By examining the other models, this interaction effect does not appear on the mean recipient allocation or on the coefficient of variation. This may indicate that although these attributes do affect the rate of selective universalization (the increase in the number of recipient counties), they do not affect the allocation amount side
of the equation. This may be due to budgetary conditions, as Stein and Bickers suggest. If the only point is to give something to everyone, then the number of recipients is the most important consideration in the allocations of a program. If, for instance, tight budgetary conditions are being faced, it may be preferable to decrease allocation sizes as opposed to the number of allocations. Therefore, these interaction effects may be more seriously felt by the ‘number of recipients’ variable, rather than the allocational variables.

Finally, apparently these structural attributes do not have much of an intercept impact. The presence of discretionary programs does increase the starting coefficient of variation level as expected since they are volatile and subjectively allocated. However, even in the more successful models, the effects of structural attributes are not strong. It seems that structural attributes, then, cannot circumvent the selective universalization process, but instead, act with the age variable to lessen the severity of the process.

TARGETING:

The second set of tests, those regarding targeting, are also interesting. The first test, simply regressing median income by the natural log of the total aid allocations to a county, reveals strong evidence against redistributive targeting in the set of all programs. It is not entirely surprising that the majority of programs are not progressively targeted since that is not the intent of most programs. Presumably, however, the government does not intend to redistribute the majority of the federal largess in a way that is overwhelmingly regressive. This test suggests that this is not the case. In fact, 82.9 per cent of the coefficients represent significant (at the .05 level) regressive targeting (i.e. the higher the median income, the higher the
allocations). Only 3.0 per cent of the cases indicate progressive targeting at statistically significant levels.\textsuperscript{8}

Again, this test may be unfair to impose upon all programs. Therefore, a test is repeated on the subset of programs that are judged to have redistributive goals. This set includes one hundred and eighty-five different programs over the seven year period (resulting in 967 cases since some programs existed in numerous years). As explained previously, these programs are judged to be redistributive in purpose, as evidenced from the eligibility requirements in the CFDA. (See Figure 1 for a graphical representation.)

The results of the targeting test on these programs are different from the previous ones, but by a much smaller margin than expected. Of the one hundred and eighty-five programs, only sixteen programs (8.6\%) are significantly progressively targeted in at least one case (i.e. year). One hundred and sixty-seven are regessively targeted in at least one case. Across cases of programs with redistributive goals, progressive targeting occurs at statistically significant levels 10.8 per cent of the time.\textsuperscript{9} Regressive targeting occurred 75.8 per cent of the time. This small number of progressive targeting cases is surprising given that most of these programs impose an income test for aid eligibility, one which is usually intended to cut off aid at low-income or very low-income levels.\textsuperscript{10}

The results are even more interesting when the progressively targeted programs are examined; the majority are similar types of programs.

Of the sixteen programs, twelve are under the jurisdiction of the Farmers Home Administration (FHA). Most of these are loans - for purposes such as housing or economic disaster assistance. These programs are almost always progressively targeted in each year during the seven year period. Three others in this category are under the jurisdiction of the Small Business Administration; these
are not consistently progressively targeted over the time period. The final program is a Department of Education program that gives money to states for distribution to local educational units; it also is inconsistently targeted.

The linkage among these programs leads to the next step in the analysis. Some theories (e.g. Peterson's) maintain that the incentives of sub-national levels of government to pursue redistributive policies are low; therefore, a control for different recipient levels has been suggested. The results above indicate the same line of reasoning. Fifteen of the sixteen progressively targeted programs have one thing in common; they are programs that primarily benefit individuals and/or profit organizations (farmers or businesses). This may indicate that the government does not put its targeting trust in higher levels of recipients (e.g. the state or county). The analysis which breaks down the recipient levels might provide interesting insights.

Indeed, it does. One analysis involves regressing the dichotomous variable for the presence of redistributive goals ('1' if it is redistributive in purpose, '0' otherwise) on the percentage of money that program gives to a particular level. The results are presented in Table II. In several cases, (cities, special districts, Indian tribes, and profit organizations), the relationship is not significant. However, across the other levels, the type of program does make a difference. In general, governmental units are not targeted with these programs. A redistributively intended program decreases the percentage of money that it gives to the state (3.3% less), the county (2.2% less), and to schools (1.5% less). On the other hand, a redistributively-intended program gives more of its money to non-profit organizations (2.9% more) and individuals (7.4%). Again, the results indicate that these 'redistributive' programs target differently at various levels.

To further exhibit these differences, the initial median income regression is broken down by recipient level. Figures 2A and 2B show the differences in the
amounts of progressively (and regressively) targeted programs, by recipient level. Comparisons are made between the percentages for all programs and for the subset. Although almost all of the levels exhibit more progressive (and less regressive) targeting in the subset of 'redistributive' programs, there is variation across the recipient levels. Again, private entities do the best - namely, individuals and profit organizations.

CONCLUSIONS

First, the support for universalization across federal aid programs is relatively strong if defined as a geographical broadening of aid, but only moderate otherwise. Age is the key variable that is always consistent with the universalism hypotheses, but only is significant one-half of the time. Further, the tests using allocational measures are the weakest ones, especially when using mean aid amounts.

Structural attributes do contribute to the analysis. Discretionary programs have a positive effect on the starting point of the coefficient of variation. More importantly, when the attributes interact with age, both have slope effects on the number of recipient counties. This is significant since the coefficients indicate that the presence of these structural attributes can almost negate the universalization effect of age.

Therefore, first, universalization can happen, but it is a process which may be slowed or absent depending upon other variables - in other words, a selective universalization. Second, the universalization process as measured here primarily affects the number of awards as opposed to the amounts and variations of those
awards. This implies that targeting can simultaneously occur with some universalization.

Indeed, the redistributive targeting results are also mixed. As expected, little redistribution occurs across all programs. Unexpectedly, on the other hand, the programs with redistributive intent do not provide a vast improvement of progressive targeting. Contrary to the theories that the federal government should be the providers of redistributive policies, these initial results indicate that it does not do so well. However, the control for levels of recipients produces a revision of this observation.

Apparently at some levels, the federal government does a more pervasive job of providing redistributive policy. The targeted levels are not governmental units, but individuals and businesses. These final results may point the way to a different approach to redistributive targeting. Perhaps studies should examine targeting at separate levels to better determine at which points redistributive targeting can be expected.

In this case, the federal government may merely be hesitant to allow sub-national units of government to control the redistribution of federal aid monies. On the other hand, it may indicate that the federal government allows states and other units to deal with their own local redistributive problems. For example, Morgan and Pelissero (1990) find that states do a better job than the federal government at targeting schools. They posit that since states are `closer to the problem', they may feel more compelled to take action. This finding is consistent with those of this study showing that federal programs do not progressively target schools at all.

Finally, the two processes - universalization and targeting - are obviously at odds with one another. Without universalistic tendencies, the federal government might be able to engage in more targeting, while the occurrence of some targeting
may come at the expense of the universalization of programs. However, the presence of one does not preclude the occurrence of the other.

In conclusion, universalism and targeting should not be considered opposites or mutually exclusive. Both are complex processes, as is especially apparent from the results of targeting by recipient level. Indications of each pattern should not be surprising considering the nature of the federal government and its representatives.

Peterson (1981) and others positing that only the federal government can pursue redistributive policies have not taken certain federal characteristics into consideration in their benefit/cost analysis. The fact that Congressional districts are geographically based proves to be a problem for the federal government. Although the centralized government has many efficiency advantages over localities when it comes to redistribution, it also has a form of the same disadvantages. Since the decision-makers in Congress are interested in pursuing policy that will help their district (and in turn contribute to reelection chances), the federal government loses its centralized efficiency advantage to the policy outcomes of universalistic processes. This problem again points to the complexity associated with the content of federal aid programs and the possibility of several processes by which they can be produced.
## Table I:

**Universalization of Federal Aid Programs**

### Independent Variables:

(t-ratios)

<table>
<thead>
<tr>
<th>Depend.Var.</th>
<th>Intercept</th>
<th>Mean Alloc. (t-1)</th>
<th>Age</th>
<th>Discret</th>
<th>Dis*Age</th>
<th>Matching</th>
<th>Match*Age</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Recip. 262,981,085 Alloc.</td>
<td>1.02*</td>
<td>-14,190,148</td>
<td>-212,316,206</td>
<td>10,182,578</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Recip. 288,928,215 Alloc.</td>
<td>1.02*</td>
<td>-15,228,646</td>
<td>-128,708,787</td>
<td>2,360,638</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depend.Var.</th>
<th>Intercept</th>
<th>Coeff. of Var. (t-1)</th>
<th>Age</th>
<th>Discret</th>
<th>Dis*Age</th>
<th>Matching</th>
<th>Match*Age</th>
<th>% Cnties</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coeff. of Variation 42.63*</td>
<td>0.01*</td>
<td>-0.73</td>
<td>27.31*</td>
<td>-0.83</td>
<td>.99  .05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coeff. of Variation 62.56*</td>
<td>0.01*</td>
<td>-1.32*</td>
<td>-7.06</td>
<td>0.25</td>
<td>-0.87  .03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depend.Var.</th>
<th>Intercept</th>
<th># Cnties (t-1)</th>
<th>Age</th>
<th>Discret</th>
<th>Dis*Age</th>
<th>Matching</th>
<th>Match*Age</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Cnties 109.78*</td>
<td>0.44*</td>
<td>13.75*</td>
<td>-71.90</td>
<td>-10.07*</td>
<td>.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Cnties -3.20</td>
<td>0.47*</td>
<td>14.30*</td>
<td>92.09*</td>
<td>-11.52*</td>
<td>.25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*significant for a one-tailed test at the .05 level or higher
Figure 1
Targeting on Median Income

LEGEND
- All Program Cases
- Redist. Intended Cases

% of Signif. Targeted Cases

Progressive
Regressive
TARGETING
TABLE II:
The Effect of Programs with Redistributive Goals on Levels of Recipients (t-ratios)

<table>
<thead>
<tr>
<th>% of money program contributes to:</th>
<th>dichot. var for programs w/ redistrib. goals</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>states</td>
<td>.436* (58.54)</td>
<td>-.033* (-2.35)</td>
</tr>
<tr>
<td>counties</td>
<td>.041* (14.63)</td>
<td>-.022* (-4.10)</td>
</tr>
<tr>
<td>cities</td>
<td>.039* (15.68)</td>
<td>-.006 (-1.32)</td>
</tr>
<tr>
<td>special district</td>
<td>.016* (8.68)</td>
<td>.000 (.09)</td>
</tr>
<tr>
<td>schools</td>
<td>.016* (11.21)</td>
<td>-.015* (-5.36)</td>
</tr>
<tr>
<td>Indian tribes</td>
<td>.026* (10.51)</td>
<td>-.003 (-.68)</td>
</tr>
<tr>
<td>non-profit organs.</td>
<td>.122* (27.26)</td>
<td>.029* (3.41)</td>
</tr>
<tr>
<td>individuals</td>
<td>.103* (16.49)</td>
<td>.074* (6.20)</td>
</tr>
<tr>
<td>profit organs.</td>
<td>.028* (11.59)</td>
<td>.001 (.19)</td>
</tr>
</tbody>
</table>

*significant at the .01 level
Figure 2B
Regressive Targeting on Median Income
By Recipient Level

LEGEND
- All
- Redist.

% of Signif. Targeted Cases

<table>
<thead>
<tr>
<th>St</th>
<th>Cty</th>
<th>Schl</th>
<th>Non-prof</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cnty</td>
<td>Sp Dist</td>
<td>Tribe</td>
<td>Indiv</td>
<td>REGRESSIVE TARGETING</td>
</tr>
</tbody>
</table>
### TABLE III:

**UNIVERSALISM ACROSS RECIPIENT LEVELS**

<table>
<thead>
<tr>
<th>recipient level</th>
<th>mean # of counties receiving aid from program level</th>
<th>% of all counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>individual</td>
<td>1182</td>
<td>38%</td>
</tr>
<tr>
<td>city</td>
<td>321</td>
<td>10</td>
</tr>
<tr>
<td>special district (e.g. irrigation district)</td>
<td>207</td>
<td>7</td>
</tr>
<tr>
<td>Indian tribe</td>
<td>197</td>
<td>6</td>
</tr>
<tr>
<td>state</td>
<td>159</td>
<td>5</td>
</tr>
<tr>
<td>county</td>
<td>151</td>
<td>5</td>
</tr>
<tr>
<td>non-profit organization</td>
<td>128</td>
<td>4</td>
</tr>
<tr>
<td>other</td>
<td>97</td>
<td>3</td>
</tr>
<tr>
<td>profit organization</td>
<td>54</td>
<td>2</td>
</tr>
</tbody>
</table>
ENDNOTES

1. The term 'constituencies' in this paper is not intended to refer to electoral units, but to general groupings of federal aid beneficiaries.

2. Stein and Bickers (1989) recent work indicates that targeting does not occur at the aggregate program level. This is expected since the universalism argument predicts that older programs will not exhibit targeting. Since a majority of federal aid programs are older in the aggregate, targeting of aid is not expected.

3. The Federal Assistance Award Data System is similar to a check register for domestic spending. Although things like defense spending and social security spending are not included, the data include information on the recipients' aid allocation and on the recipient itself, down to its location by zip code. The data was acquired through an ongoing data collection effort, funded by a grant to Robert Stein and Kenneth Bickers from the National Science Foundation.

4. The Catalog of Federal Domestic Assistance (CFDA) is published twice yearly (a basic catalog and a supplement later in the year) and provides program level information including applicant and beneficiary eligibility, structural attributes of programs, and aid restrictions, etc.

5. This reliability score was obtained using sections of the same coding that were coded by two different coders.

6. The previous study looked only at data for the year 1982 and employed only the universalism tests, producing far less results than the present study.

7. Of course, the theoretical discussions of Musgrave and Oates and Peterson are about redistributive policy. As noted, in some cases this study uses the whole of federal domestic aid programs in the tests for targeting (and universalism). Not all domestic programs are intended to be redistributive, however. Therefore, as mentioned earlier, some tests are also performed using only programs intended to be redistributive. This does not entirely solve the problem. Programs like Social Security and Food Stamps, while targeted toward the poor, are not geographically targeted toward the poor. Therefore, tests for targeting to poorer counties will not display progressive targeting for these programs. Only if data existed on the income of the specific individual recipients could this relationship become visible. In light of this problem, one should not conclude from the subsequent results that programs like Food Stamps are not providing aid to needy recipients. This may explain why the results indicate that some programs that target depressed geographical areas (e.g. rural communities) are more prominent among those programs that are progressively targeted.

8. The mean coefficient across all programs represents a 0.07 per cent increase in aid associated with a 1000 dollar increase in median income. The highest value would indicate a 0.9 per cent increase in allocations for the same income increase, while the lowest coefficient would decrease aid allocations by 0.41 for a 1000 dollar increase in median income.
9. For the subset of programs with redistributive intent, the mean coefficient represents a 0.04 increase in funds in response to a 1000 dollar increase in median income. The maximum increase in aid associated with the median income increase is 0.52 per cent, while the minimum value represents a 0.41 decrease in aid for that median income change.

10. The terms `low and very-low income' are the exact ones used in the titles of some of these programs with alleged redistributive intent.
REFERENCES


