SEPARATION OF THE REDISTRIBUTIVE AND ALLOCATIVE FUNCTIONS OF GOVERNMENT

A public choice perspective

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The implications of not separating the redistributive and allocative functions of government are examined from a public choice perspective. Many democratic governments lump transfers and public services into a single unified budget. This can distort voter perceptions of the marginal cost of public services relative to the marginal tax price embodied in the taxing institutions employed to generate public revenue. If the median voter's perception of marginal cost is affected, the majority rule outcome with respect to public goods spending will be altered correspondingly.

1. Introduction

The methodological propriety of separate consideration of the allocative and redistributive activities of government has been subject to some debate in the public finance literature [Musgrave (1959), Samuelson (1969), and Hochman and Rogers (1969)]. In this paper we examine, from a public choice perspective, the implication of not separating the redistributive and allocative activities of government.

Many democratic governments lump together transfers and public services in a single unified budget. We will argue that this can distort voter perception of the marginal cost of public services relative to the marginal tax prices embodied in the taxing institution employed to generate public revenue. If the median voter's perception of marginal cost is affected, the majority rule outcome with respect to the level of spending for public goods will be altered correspondingly. This distortion arises if budgeting institutions cause voters to perceive that marginal units of a public good are financed out of reduced transfer spending rather than higher taxes. Relevant rules

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from this perspective include constraints on total government outlays, earmarked taxes, the order in which budget choices are made and the manner in which the transfer process is institutionalized.

2. A simple three-voter model

We begin with a simple model in which there are three voters, all of whom are identical with respect to preferences and income. The government provides a single public good, defense, which is financed by a taxing institution which assigns equal tax shares to the three voters. We assume initially that no income redistribution is carried out through the public sector. Suppose that defense is produced under conditions of constant marginal cost of $3. Each voter then confronts a marginal tax price of $1. Given our assumption of identical preferences, these equal tax prices correspond to a Lindahl benefit tax. Consequently, there will be unanimous agreement among the voters on a Pareto efficient level of defense spending. We assume this to be $30 (10 units).

Now suppose that, in addition to defense outlays, any majority coalition of voters has the option of voting transfer payments for its members out of public revenue. We assume initially that voter support for transfers is motivated by a self-interested desire to increase own consumption rather than any altruistic concern with increasing the consumption of others. The government budget can now contain both public good and transfer components. We are interested in whether and how different voting rules can affect outlays for each activity. Specifically we ask whether use of the fisc for redistributive purposes can prevent an efficient level of spending on defense despite an allocation of tax shares in accordance with the benefit principle. For simplicity, we assume that defense is characterized by zero income elasticity of demand. This insures that the government’s redistributive activity does not affect the efficient level of defense consumption.

There are a variety of voting rules and procedures which might be employed to determine the government budget. The first to be examined is a two-stage process in which voters are asked first to choose a total level of government spending (and taxing) and then to allocate that total between outlays for defense and for transfers. It is the second stage of this procedure which is of primary concern.

Suppose that two voters form a majority coalition to control the allocation of some fixed level of expenditure. Money not spent on defense is divided equally between the two voters. These two voters would not choose to spend $30 on defense even if the total budget were large enough to accommodate that level of expenditure. The requirement to finance defense out of what otherwise would be transfer income has changed the marginal cost of defense to each coalition member. Marginal cost is now $1.50 rather than the $1
which would be required if the marginal unit of defense were financed by levying additional taxes.

In the preceding example, membership in the transfer coalition was established prior to the vote on defense spending. How might the outcome be altered if voters were uncertain about who would be the beneficiaries of the transfer process? Suppose, for example, that budgeting rules required that the decision on defense spending be made first with any residual funds to be allocated as transfers to whatever majority coalition is successful in forming. Assume also that this reversal of the temporal ordering of the votes on defense and transfers has the effect, as it obviously might, of preventing a transfer coalition from forming until after the vote on defense outlays. If, at the time the defense vote is taken, each of our three voters views each of the three possible majority transfer coalitions as equally likely, the expected individual marginal cost of defense is $1. For every $3 not allocated to defense, each voter perceives a two-thirds chance of receiving $1.50 and a one-third chance of receiving nothing from the transfer process. If voters are risk neutral, uncertainty about membership in the transfer coalition restores efficiency to the decision on public goods spending. If voters are risk averse, uncertainty might actually result in a decision to collectively purchase more than 10 units of defense.

An alternative procedure for determining budget size and composition requires separate decisions by voters regarding how much to tax and to spend for each function. Separation of the financing decisions on defense and transfers can result in voter perception that marginal units of defense will be financed by increasing tax burden rather than at the expense of transfer spending. Given our assumption that the existing tax system imposes the ‘correct’ set of marginal tax prices on voters vis-à-vis defense expenditures, this change in the rules might restore efficiency to the defense decision.

However, if the same tax base is used to finance defense and transfers and if, in addition, the transfer coalition knows its identity in advance of the vote on defense spending, the separation of decisions on transfer and defense spending may be nominal rather than real. It is in the interest of the transfer coalition to impose the revenue maximizing tax rate on whatever base is being employed. If this occurs, the coalition, in effect, is able to secure the maximum transfer to themselves through the fiscal process and then to ‘choose’ to allocate some portion of their post-transfer income to defense expenditure. Because marginal units of defense again are effectively financed out of what would otherwise be transfer income, the distorted perception of marginal cost which occurred in our first example reappears. One way of avoiding this problem and achieving a true separation of the taxing–spending decisions on defense and transfers is to employ earmarked taxes. A require-

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1 It should be noted that once we have allowed the kind of voter response to tax rates which limits the maximum from a particular base we have departed from a pure benefit tax.
ment that each activity be financed from its own tax base imposes an institutional barrier which prevents one activity from being financed at the expense of the other.

3. Transfers with interdependent utility functions

Thus far we have assumed that the motivation for transfer spending was purely selfish. What if voters have an altruistic demand for use of the fisc to transfer from themselves to others? The basic implication of our model is not changed. If total revenue is fixed, voters still must choose between selfish transfers or allocating revenue to a public good which, in this case, is a benevolent transfer to the poor. However, because the poor can become members of the transfer coalition, they receive more transfer income than our previous analysis would suggest, but still less than would be the case if the potential for selfish transfers were removed.

Consider a society of five individuals, four rich and one poor. The four rich individuals have some concern for the welfare of the poor person. In fig. 1 we have mapped the preferences of a typical wealthy individual, measuring own income on the horizontal axis and transfers to the poor on the vertical axis. With equal tax shares the rich individual must pay 25¢ for every $1 of transfer to the poor person. The slope of budget constraint $AA$ is $-4$. Without the option for selfish transfers, the wealthy individual would support a public transfer of $120 at a tax cost to himself of $30. Assume that tax rates have been set to generate this $120 from the four wealthy persons. Now suppose that this money can either be transferred completely to the poor individual — a public good — or can be siphoned by a majority coalition into selfish transfers.

If the majority coalition consists of the three wealthy individuals who share equally in selfish transfers, the marginal cost to each of increasing the income of the poor rises to 33¢ per dollar transfer. In fig. 1 the effective budget constraint for a wealthy coalition member is $bcd$, with an optimum at point $c$. In response to the higher marginal cost, the majority coalition will devote only a portion of the $120 in tax revenue to the poor person. The rest will go to selfish transfers.

The solution at $c$ in fig. 1 is based on an assumption that the majority transfer coalition consists of three wealthy individuals. However, a coalition of two rich and one poor person provides all coalition members with a higher level of utility. This is because spillover benefits accompany transfers to the poor individual. If, for example, the poor person receives a pro rata share of selfish transfers, the effective budget constraint for a wealthy coalition member is $bf$ instead of $bcd$. Even if all public funds were diverted to selfish transfers, the poor person would receive $40. This is the situation at point $f$. 
Not only is the poor individual a more attractive member of the coalition than a non-poor individual, wealthy coalition members may even grant the poor member a greater than equal share of the funds diverted to the transfer coalition. In fig. 1, bgf depicts the possible combinations of own income and transfers to the poor available to the non-poor coalition member. Movement along that constraint to the left of point $f$ represents increasingly larger shares of the coalition's transfer income going to the poor member, with point $b$, of course, representing a 100 percent share. As depicted in fig. 1, the wealthy member of the coalition would be willing to give the poor member a larger than equal share, such as that depicted at point $g$. 
4. The large number setting

Regardless of the number of voters, if a stable, identifiable majority transfer coalition exists, its members will perceive higher costs to them if incremental units of the public good are financed by reducing transfer spending rather than increasing taxes. However, an increase in the number of voters should make it more difficult for such a stable coalition to form, especially if potential members of that coalition can be chosen at random from the voting population. This suggests that with large numbers, uncertainty about coalition membership and net gains from the transfer process is likely to dominate voter perceptions of the marginal cost of a public good.

Suppose that there are \( N \) voters and that \( n \) denotes the number required for a simple majority. Assume, as in our earlier example, that some fixed level of total expenditure must be allocated between defense and transfers and that voters must choose defense spending first, with residual funds allocated to transfer recipients. If voters regard any of the possible majority coalitions as equally likely, the probability that any individual will be a transfer beneficiary is \( \frac{n}{N} \). Given equal sharing among coalition members and denoting the marginal cost of defense as \( C \), the expected value of the individual marginal cost of defense is

\[
\frac{(n/N)(C/n)}{N} = \frac{C}{N}.
\]

\( C/N \) is also the average individual tax price if defense is financed on the margin from higher taxes. If the median voter on defense were assigned a tax share of \( 1/N \), his 'tax price' of defense and the expected marginal cost of defense measured in terms of forgone transfer income are equal.

A particular taxing institution may not assign a tax price to the median voter which is equal to the average tax price. Thus, the potential for selfish transfers can create a difference between the perceived cost of financing marginal units of defense out of increased taxes as opposed to reduced transfers even if all transfer coalitions are regarded as equiprobable. However, there is no systematic bias of the sort incurred in the certainty model. Such a bias might appear if the median voter were to perceive some probability greater than \( n/N \) of being a beneficiary of the transfer process. This could occur if budgeting institutions make some transfer coalitions more likely than others.

\( ^2(\binom{N}{n}) \) is the number of possible majority coalitions. \( \binom{N-1}{n-1} \) is the number of coalitions containing a specific voter.

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\binom{N-1}{n-1} \cdot \binom{N}{n} = \frac{N!}{n!}
\]

is the probability that a specific voter will be included in the majority.
As a result of several features of U.S. political institutions, the likely beneficiaries of government transfer spending are not a randomly selected 51 percent of the voting population. In reality, spending votes are taken by elected representatives, not directly by the voters, as in our simple model. Indirect voting enhances the relative influence of special interest groups — those with a comparative advantage in organizing to exert political influence. The majority is likely to consist of a coalition of such minorities. In the U.S. budget, several such specific minority groups — the poor, the elderly, farmers, etc. — have succeeded in institutionalizing transfers to their members through a set of 'entitlement' programs. Entitlements are not subject to annual budget review, but rather are funded for indefinite periods through permanent appropriations. These factors should reduce considerably the costs of maintaining a stable, identifiable transfer coalition. The coalition is not required to re-establish itself every year in order to maintain its claim on budget funds. Once having established benefit levels, it has a prior claim on public revenue for an indefinite number of future budget years.

Those programs, which are subject to the annual appropriations process, tend to be the more traditional public goods such as national defense, environmental protection and the like. If the budget is subject to either an implicit or explicit constraint on total spending, these services must be funded from the residual which remains after entitlements have claimed their share. Proposals to increase public goods spending beyond this residual level must come at the expense of reduced outlays for existing transfer programs with identifiable beneficiaries. This suggests that a bias in the perceived marginal cost of public goods is especially likely to occur in times of budget stringency when increased demands for public goods outlays can only be accommodated by reductions in existing transfer programs.

The analysis in this paper has some interesting potential implications for current U.S. policy. Proposals to place formal and explicit constitutional limits on total federal government spending are receiving serious consideration. Such proposals, if adopted, would formally require that marginal units of public good expenditure be financed from reduced transfer spending rather than higher taxes. Some supporters of spending limits are also desirous of increasing total outlays for national defense. Our analysis suggests that total spending limits and higher defense outlays may be mutually incompatible rather than complementary policy objectives.

Social security financing is another policy issue for which the analysis of this paper has some relevance. Social security, which is the largest entitlement program in the budget, is financed by an earmarked payroll tax. As noted above, earmarking is one means of forcing a separation of public goods and transfer spending. Current proposals to allow at least partial general revenue financing of social security would weaken this separation between transfer and public goods outlays in the budget process and should be carefully considered in view of the potential consequences. With regard to
this issue, it should be noted that a total spending constraint would also tie together transfers and public goods outlays even if earmarking were retained.

References