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METROPOLITAN FINANCE RECONSIDERED: BUDGET FUNCTIONS AND MULTI-LEVEL GOVERNMENTS

Charles M. Tiebout and David B. Houston

THE current "chaos" in metropolitan finance stems from two different sets of problems. The first, which we label "traditional," are exemplified by such expressions as: "ever-increasing demands for service," "inadequate tax base," "archaic tax structure," "lack of planning," and other familiar expressions. Without doubting that these problems are acute and in need of attention, we wish to consider an overlooked second set of problems.

The second set of problems arises when the budget functions of governments are placed within the context of the newly developed theory of public finance.[1] Here, governments are seen as performing certain overall budget functions — provision of goods and services, income redistribution, and economic stabilization. However, except for the provision of one class of goods and services, namely, social goods, little attention has been focused on the budget problems involved in applying the newer theory to lower levels of government and the attendant problems of fiscal federalism which arise. We will argue that much of the "chaos" in metropolitan finance arises from a misunderstanding of the budget functions to be performed. The heart of the problem, it will be shown, lies in the vertical relations between governmental units. Under fiscal federalism the failure to solve problems of vertical relations, in turn, gives rise to certain horizontal conflicts between governmental units. While our discussion applies to lower-level governments in general, we focus attention on metropolitan areas where the problems are more vividly illustrated.

The analysis will be structured in terms of the various budget functions which governments perform. The provision of social goods will be considered briefly. Next, we look into certain interferences with consumer sovereignty (merit goods) which governments undertake. Finally, issues involved when governments redistribute income will be considered.[2] For each function we postulate a set of vertical rules ordering the relations between governments. This ordering will enable us to highlight the issues involved.

Provision of Social Goods

Governments are called on to provide certain goods where, because of externalities, provision by the private market is deemed inadequate.[3] One set of goods where, it is argued, the private market solution is unsatisfactory, have been titled "social" or "collective consumption" goods.[4]

It should be recognized that the presence of externalities, as well as the degree to which they exist, are part of a consumer's utility function. Some individuals may perceive large externalities where others perceive none at all. In turn, the presence and the degree of externalities can only be ascertained by a registration of consumer preferences, which in a democracy implies some voting process. (The conceptual problems involved in determining the constituency and a majority are difficult indeed. They may properly be considered beyond the scope of this paper.) Such a vote is needed and resolves, not one, but two questions: (1) which goods are social goods and to what degree; and (2) what is the geographic extent of the spillovers.

As a point of departure we suggest that the following vertical relations are established

[1] The newer theories — perhaps "recent interest" is a better term — are given in: Richard Musgrave, *The Theory of Public Finance* (New York, 1959); Paul Samuelson, "The Pure Theory of Public Expenditures," this REVIEW, XXXVI (November 1954), 387–89; "A Diagrammatic Exposition of a Pure Theory of Public Expenditures," *Ibid.*, XXXVII (November 1955), 350–56; "Aspects of Public Expenditure Theories," *Ibid.*, XL (November 1958), 332–38; Charles M. Tiebout, "A Pure Theory of Local Expenditures," *Journal of Political Economy*, LXIV (October 1956), 416–24.

[2] The term "provision," as used here, need not imply expenditures by a government. The outlawing by fiat of rubbish burning in Los Angeles can be considered an attempt to "provide" fresh air (anti-smog).

[3] Stabilization as a budget function has been omitted because of the relatively small flexibility which metropolitan and local governments have in this area.

[4] Musgrave and Samuelson, op. cit.

through a voting process to determine what goods are social goods and, in turn, the level of government needed to provide them:

From the set of all goods, (1) a sub-set of goods are considered *national* social goods and are provided by the federal government; for example, national defense. (2) Another sub-set of goods are voted partly regional and partly national social goods. Both the federal and lower-level governments provide these *mixed* goods; for example, highways. (3) All other goods are left to the option of non-federal levels of government. This process is repeated at each level of government. State governments, the next level below the federal, classify some of the goods as state social goods, for example, state police. Another class is considered mixed — education, for example — and so down through the lowest level of government. The remaining goods, the vast majority, are private market goods. After such an ordering is determined, governmental units, conceptually, can be created to correspond to the scope of the various goods.

Unfortunately, real world political boundaries are not flexible. This creates problems of "spillovers" of benefits and costs between communities. These spillover problems are especially acute in balkanized metropolitan regions. Since these problems have been discussed elsewhere, we need not repeat them here.[5]

Economies of Scale

One issue, however, continually comes into the discussion of metropolitan finance — economies of scale. Economies of scale are often eulogized in the call for metropolitan government. For example, in Miami, the vote for "Metro" (Metropolitan Dade County) was influenced by the slogan "economy and efficiency." In terms of our vertical rules, "the economies" in production (economies of scale) may indicate that governmental units are too small. Opponents of large-scale governments, on the other hand, have argued in terms of the "cost" of local sovereignty.

A solution to the "economies of scale" versus "local sovereignty" argument in metropolitan finance can be illustrated by considering the situation where economies of scale exist and, further, where the benefits from the social good provided accrue largely within the community; that is, spillovers to other communities are negligible. In this situation, economies of scale can be captured when it is recalled that the *provision* of social goods by a government need not imply *production* by that government; for example, governments provide free milk to schools with milk produced by private contractors. This separation of provision and production is the basis of a rather unique operation, in terms of scale, in the Los Angeles area known as the Lakewood Plan.

An unincorporated area in Los Angeles County may vote to incorporate into a city — in part, for purposes of sales tax subventions. The new city, in turn, may contract with the county or private firms for most social goods — police and fire protection, street maintenance, and other such goods. This arrangement has been named "The Lakewood Plan" — Lakewood was the first city to so contract. The county in supplying the services provides them at cost — evidently, average cost. Communities can order the amount of service they choose, say, five 24-hour patrol cars at so much per car per year. Under this arrangement smaller cities can contract for services which they cannot provide economically. Even larger cities find contracting for such services as center line and cross-walk painting on streets less costly than doing it themselves.

The Lakewood Plan, then, underscores the point that the presence of economies of scale in production by no means necessarily implies consolidation for provision of a social good — or the merit and necessity goods discussed below. Most discussions of economies of scale have ignored this point and have thus made the problem appear much more difficult than it is in actuality.

Interferences with Consumer Sovereignty

Governments act to interfere with consumer sovereignty by providing more or less of certain goods, beyond those classified as social goods.

[5] Charles M. Tiebout, "An Economic Theory of Fiscal Decentralization," in *Public Finances: Needs, Sources, and Utilization*, National Bureau of Economic Research (Princeton, 1961), 79–96.

In looking for the rationale behind these actions, some writers have called these "interference" goods "merit" goods.[6] Thus, where governments have provided more of a good than a private market solution, the good is classified as meritorious. Where the interference is negative the good is considered demeritorious. Since the discussion of merit goods in the literature has not been too explicit, we turn to the nature or characteristics of these goods.

Merit goods, like social goods, have externalities but the externalities are psychic in nature. This recognizes the fact that an individual's utility function takes into account other people's consumption of merit and demerit goods. The distinction between merit and social good rests upon differences in society's motives. Citizens declaring a good meritorious believe that it is "good" for the individual, and therefore they encourage its consumption. The externalities take the form of "psychic income" to the citizenry. With social goods the externalities are more objective, and the motive of provision is to allow the citizens as a whole to enjoy the externalities which would be lost if they acted individually.

The provision of merit goods involves certain problems of fiscal federalism. These problems emanate from the fact that the citizen, finding himself a constituent in several governments simultaneously, realizes that he must compromise his desire for local autonomy. This introduces the possibility of conflicts. The nature of these conflicts can be underscored if we postulate a set of vertical ordering rules for the provision of merit goods. These rules, we suggest, approximate the explicit and, more often, implicit rules relating various governmental levels. More important, they point up the question to be resolved; what level of government is to decide whether or not a particular good is a merit?

The hierarchical rules relevant to the provision of merit goods may be conceptualized as follows. Starting at the federal level, from the set of all possible goods, a majority of citizens vote that a set are neither meritorious nor demeritorious and are to be provided by the private market in accordance with consumer preferences.[7] All other goods consist of three types. (1) Some merit goods are in the federal domain and no lower level may contradict the federal position; for example, the use of heroin is demeritorious in all 50 states. (2) Other merit goods are provided, in part, by the federal government, but lower levels have the option to declare these goods even more meritorious or demeritorious; for example, a federal liquor tax and state option on liquor consumption. In effect, then, the federal level defines a minimum standard of meritoriousness or demeritoriousness for these goods. (3) Another set of goods are recognized as possibly meritorious or demeritorious; but the ultimate decision is left to lower levels of governments; for example, providing municipal beaches.

This classification of types of merit goods is applied at each level of government in a descending order, subject to the restraint that no lower level of government may reverse the decision of a higher level, even as a matter of degree; for example, allow slavery or abolish the Federal cigarette tax.[8]

[6] Musgrave op. cit., Ch. 1.

[7] We again note that a technical definition of majority is beyond the scope of this paper.

[8] This hierarchical ordering leaves unsettled the question of an optimal solution to merit goods provision where lower-level governments are considered *de novo*. Put another way, while the provision of social goods can be allocated to vertical layers on the basis of production economies and the scope of benefits, this kind of solution is not applicable to merit goods. Merit goods do not have a spatial extent, except as defined by some political boundary. Why is this a problem?

Consider a nation with one million population and good *k* which 400,000 believe to be demeritorious; and the rest of the voters consider it should be left to lower-level option. Failing a national majority, will it be declared demeritorious by some governments at the next level? If the citizens who consider *k* demeritorious are not spread uniformly throughout space, they will constitute a majority within some governmental units. Yet, suppose one had to gerrymander space *de novo* creating the geographical boundaries of the next governmental level. What is to be maximized? Carving out a government whose constituency consists only of the 400,000 who consider *k* demeritorious does not seem satisfactory. They would not need to declare *k* demeritorious since with unanimity they will not use the good — unless the action is taken to protect themselves from their own myopia; e.g., the night-owl who votes to close bars at a uniform hour in self-protection. The remaining 600,000 citizens will belong to states that do not consider *k* demeritorious. In effect, if the next lower-level government is determined in this manner, *k* will be placed in a private good category. At the other extreme, we could imagine a gerrymandering which gives the 400,000, "*k* is demeritorious people," control over 399,999 additional people. Which is an optimal solution, if either?

As an example of an issue under these vertical rules in practice, consider a city which wishes to legalize gambling. The federal government evidently views gambling as a lower option good — leaving aside any constitutional question. Thus, the option is passed on to the states. The state may place gambling in the demeritorious class. If so, the city simply has no choice to permit gambling.

Conceptually, efficiency implies, in addition to cost considerations, that political boundaries are at least as large as the scope of the merit goods provided. This parallels the provision of social goods. However, there is an asymmetry in the nature of the scope of merit goods vis-à-vis demerit goods as the following examples will show. Again, for more vivid illustrations we turn to metropolitan areas.

Consider first the case of a good considered meritorious. A local community may wish to provide a community college, beach, concert, zoo, etc. To the extent that the community can identify its own residents it can prevent citizens of neighboring communities from enjoying these facilities. Thus, by issuing beach tags the community is not obliged to subsidize non-residents.

The case of a demerit good, however, is not so easily resolved. As an example, consider the dilemma of communities which feel gambling and bars are demeritorious. However, these communities may have neighbors which have not declared these goods demeritorious. Given high intra-urban mobility a local community is virtually helpless in providing demerit goods. The only solution would be to prevent its residents from going outside the community, which is obviously unacceptable.

The problem, then, is that while a community may prevent non-residents from enjoying its merit goods, it cannot prevent its own citizens from consuming, in nearby communities, goods which it has declared demeritorious.

Thus, when there is no political unit with boundaries coterminous with the scope of the merit good to be provided two alternatives are available. Neither is altogether satisfactory. First, the good may be passed down to lower levels to be provided at their option. The limitations of this approach have already been illustrated by the above examples. The result is usually an ineffective provision, particularly of demerit goods. A second possibility is to allow the next higher level of government to provide the good. The problem here is that it usually results in the imposition of the merit (or demerit) good on a larger group of citizens than public opinion or voter preference would warrant.

Frankly, we sidestep this issue by considering geographical political boundaries as determined by other variables or historically given.

Redistribution of Income

Thus far we have considered vertical rules appropriate to the provision of interference (merit) goods. Governments also redistribute income. Before considering the redistribution activities of various levels of government we think it useful to define a different class of goods provided by governments. In terms of the rationale of provision, we call these *necessity goods* and they appear *only in relation to the redistribution budget.*

Necessity Goods

Citizens, via government, having decided that they wish to redistribute income by brackets and that the redistribution would take the form of income in kind rather than money, specify certain necessity goods which shall be used to effect the transfer.

The decision that redistribution should take the form of income in kind implies a priority of wants. When housing, medical care and other such goods are still in "need" by some groups, mink stoles are *unnecessary* goods for other groups. In this sense, the same motive lies behind both a luxury tax and a necessity transfer.

Necessity goods should not be confused with merit goods. One might argue that government-sponsored low-income housing and mink stoles are merit and demerit goods, respectively. However, this is not the case, since at some more equal distribution of income they would no longer be meritorious and demeritorious. In contrast, the desire to subsidize an art workshop may exist regardless of the size distribution of income. Hence, an art workshop would be a merit good, not a necessity good.[9] The

[9] We recognize that in the case of merit goods there may

main characteristic of necessity goods, then, is their role in redistribution. In a society where no size redistribution of income was desired, there would be no necessity goods.

Vertical Rules

Without question governments do redistribute income by size brackets one way or another. But, one may ask if this is a "proper" function of all levels of government.[10] This question raises issues of fiscal federalism. If the federal government has by its action arrived at the "proper" distribution of income, has a lower level of government the authority to alter the solution? Clearly, if two levels of government successively try to alter each other's solution, the result is unstable. A compromise will satisfy neither.

In order to lead into the hierarchical rules for local governments, let us start with an extreme and purely hypothetical case. Suppose that the federal government is considered the final authority and sets the "proper" distribution. However, assume that all people in a given community agree, rich and poor alike, that income ought to be more equally divided than that distribution considered "proper" by the federal government. Since this is a unanimous view, taxes and transfers take place until this local "proper" distribution is reached. Even though technically inconsistent with federal domination, this case should reasonably be allowed.

We now examine a set of less unrealistic rules governing income redistribution where unanimity is not required. These rules view the federal government as: (1) arriving at the "proper" distribution of income by taxes and transfers; and (2) specifying the following rules for some other redistribution by lower levels of government.[11] First, in no case may a lower level reverse the overall direction of the higher level's redistribution. Second, a state may only redistribute away from the federal distribution if a majority, somehow defined, of those suffering a tax loss, so vote. Transfer recipients are disenfranchised. If a locality within the state chooses to redistribute away from the "proper" pattern voted by the state, again only the tax losers may vote and the direction must be unaltered. In essence, then, the function of the higher level of government, once it sets the "proper" distribution, is to protect the position of possible tax payers from arbitrary actions by the possible transfer receivers. The few rich in an otherwise poor community are protected against a simple majority vote of all citizens.

Redistribution in Metropolitan Regions

The question of redistribution at the local-metropolitan level is an important and real social issue. At first blush it may appear that local governments do not act under the rules specified above. However, with respect to the voting mechanism, insofar as decisions to redistribute are made by the political elite, the actual "voters" will be, for the most part, the tax losers. Given this mechanism, one might still ask why the rich will consent to further redistribution.

Probably the most plausible explanation must be couched in terms of "civic spirit," "community responsibility," and similar expressions. As a matter of degree, well-to-do residents are often willing to allow local governments to redistribute, thus serving the role of a charity.[12] Indeed, a discussion of a theory of charity might be appropriate in the study of local government fiscal behavior.[13]

be a form of redistribution involved. However, this redistribution should not be confused with redistribution by income brackets. In the process of providing merit goods the income redistribution that takes place is only incidental. The merit good intent of a free art workshop is to increase art production, not to give income-in-kind to the artist because he is poor.

[10] One might ask the additional question, "Can the community avoid further redistribution?" In the absence of as many flat taxes as there are people, this may be impossible. This paper recognizes that distributional and goods provision questions require simultaneous decisions. See Robert Strotz, "Two Propositions Related to Public Goods," this REVIEW, XL (November 1958), 329–31; and Keimei Kaizuka's, "Comment," *Ibid.*, XLIII (February 1961), 92–93.

[11] The passage of the federal 80 per cent credit clause against state death taxes in 1926, after Florida and other states abolished inheritance taxes, is an example of federal dominance. While one motive behind such an act is to avoid horizontal competition, state versus state, implicit in such an act is the federal approval of this redistributive action.

[12] Clearly, if the tax losses are offset by the psychic income of "civic spirit," no net tax burden exists. We disregard this in discussing benefits.

[13] It should be noted that goods provided by charities in

As a result of permitting redistribution at the local level, several issues arise. Of the three which we will discuss, the first two are part of the redistribution process. They constitute the political *modus operandi* which enables the community to effect a "proper" redistribution. The third item deals with the problems of horizontal conflict resulting from redistribution.

Local redistribution is not likely to take the "pure" form of taxes and transfers exclusively. Rather, in the provision of goods the net residuums will be unequal yielding the same effect.[14] Lower income individuals may receive more in benefits than they pay in taxes. How much of an unfavorable net residuum is acceptable to the upper income brackets depends, in part, on the forms of the income transfer. The "pure" form, taxes and transfers, may not be looked upon with much favor. Taxes with benefits accruing in the form of necessity goods, say, free school lunches, may be more favorably received.

A second aspect of redistribution is that, politically, it is often more advisable to argue that low-income housing, for example, is a social good, not a necessity good. It is easier to get the tax support if it is argued that *all* people benefit from low-income housing, even though the proponents' real motive is in terms of a necessity good (redistribution).

one community may be provided by the local government in another community.

[14] An individual's "net residuum" is equal to the benefits received less taxes paid. See James Buchanan, "Federalism and Fiscal Equity," *American Economic Review*, XL (September 1950), 583–99; reprinted (93–109) in *Readings in the Economics of Taxation*, Ed. by Richard Musgrave and Caryl Shoup (Homewood, 1959).

A further consequence of local redistribution in metropolitan regions is seen in the form of horizontal conflicts. One might suggest that, to the extent that these rules have not been operative, "tax colonies" have appeared. Within the metropolitan region there is some freedom of choice in the community of residence. This is especially true for the higher-income commuters. In consequence, any community which redistributes income "too far" may lose its higher-income residents. Higher-income people may regroup into a suburban tax colony.

Conclusions

Fredrick C. Gardiner, Chairman of the Board of Metropolitan Toronto, has stated, "Metropolitan governments will provide metropolitan goods and local governments will provide local goods."[15] However appealing this statement may be, it begs the issue.

Even if the only goods provided are social goods, we have no mechanism to decide which are local and which are metropolitan in scope. Moreover, as this discussion has shown, governments provide merit and necessity goods. When these goods are also included in public budget functions, the issues become more complex.

This paper is precisely concerned with these issues and offers a framework of analysis which reduces the complexity by separating the issues. In turn, we think that policies for the solution of metropolitan problems will be more meaningful when viewed against the background of our analysis.

[15] "Municipal Affairs," *Proceedings, American Industrial Development Council*, Annual Meeting, Atlantic City (March 1960), 124.