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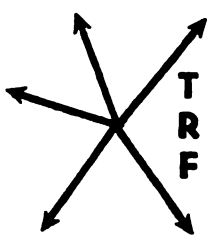
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TRANSPORTATION RESEARCH FORUM

Financing State Transit Subsidies

by John W. Fuller*

I. INTRODUCTION

Subsidy in Urban Transit

THE EXTENT of government involvement in transport has been increasing over the past decade in the United States, most especially in the area of urban transportation. It has now been just ten years since introduction of the landmark Urban Mass Transportation Assistance Act of 1964,¹ which followed upon years of effort at the federal level to begin financing local transit systems. Although transit ridership continues to fall,² the expansion of federal programs in numbers and dollars has been remarkable since 1964. The UMTA Act permitted grants not to exceed \$75 million in fiscal year 1965; since 1970 the basic Act, as amended, has provided contract authority of approximately \$1 billion a year (in a \$10 billion, 12-year program).

In addition to direct subsidies under the UMTA Act, federal involvement in urban transport has included general transportation planning and facility construction in cities under the several Federal-Aid Highway Acts. Highway building has supported transit's chief competitor, and allowed changes in urban structure that may preclude any return to dependence on traditional mass transit technology. However, bus transit operators have utilized the new highways either without paying federal user fees (in the case of publicly-owned transit) or by paying rather minimal fees (if private firms).³ More recently, highway funds have come to be spent directly in some instances for construction that benefits and promotes transit, for example through providing fringe parking areas. The 1973 Senate version of the most recent Federal-Aid Highway Act (S. 502) would greatly expand these uses—in essence making federal money available at local direction for either highways or transit in major

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1 Public Law 88-365, 78 Stat. 302, U.S. Code, Vol. XLIX, sec. 1601.

2 Ridership declined from 6.854 billion in 1964 to 5.253 billion in 1972. See *Transit Fact Book* (Washington, D.C.: American Transit Association, 1968), p. 7, and *Monthly Transit Traffic*, XLIX, No. 1 (Jan. 25, 1973), p. 1.

3 U.S. Department of Transportation, *Feasibility of Federal Assistance for Urban Mass Transportation Operating Costs* (Washington, D.C.: Government Printing Office, 1971), p. 36. Many states have also reduced user fees and taxes for transit operators. See William D. Hart, *Public Financial Support for Transit*, Technical Study Memorandum No. 7 (Washington, D.C.: Highway Users Federation, [1973]), p. 5.

metropolitan areas.⁴ There are, then, grounds for the expectation that ever more extensive federal support will be applied to urban transportation programs, and be flexibly directed at either transit or highway solutions, whichever is the more effective in a given instance.⁵

Yet basic to today's subsidy programs, expanded and more heavily funded though they have become, is a narrow conception of transit problems. Federal programs, with matching state or local funds, do subsidize research, demonstration, and planning in transit—but the bulk of the dollars go to capital subsidy. The transit solution is viewed as a matter of relieving capital scarcity. Pricing, city structure and land use, technological advancement, institutional relationships, and financial or regulatory assistance to competitors are dealt with either not at all by federal agencies, or as subsidiary issues. Eventual highway fund applications will continue to be capital intensive through producing transit vehicles and ways, parking facilities, shelters, terminal structures and the like.

Perhaps the narrow conception of transit problems, as yielding only to the application of capital subsidy, cannot yet be proven incorrect. Surely, as an empirical matter, federal capital grants have so far been too small to support many truly major programs in the fields of rail transit or commuter railroads.⁶ Further, it is not absolutely certain that the implicit, competing goals of urban transportation programs—such as maintenance of current life-styles and stability of the social order, program efficiency, income redistribution and welfare for special user and non-user groups, promotion of central cities, minimization of land use and environmental pollution—cannot best be met by direct transit subsidy, as opposed to institutional restructuring or more generalized federal grants. At any rate, pending resolution of these questions, the transport-sector answer to transit problems is subsidy. But the logical result of present federal subsidy mechanisms, especially so far as bus transit is concerned, has been the production of relative capital abundance in a labor-intensive industry.⁷ Capital subsidy is therefore becoming increasingly inefficient. And, as capital for transit has become common, the expressed needs of localities have swung toward the subsidy of operating deficits.⁸

The necessity for more broadly directed transit subsidy is well expressed by the New York DOT in their *Statewide Master Plan for Transportation*:

4 In late July, 1973, the compromise congressional committee adopted essential elements of S. 502. Of the \$780 million in federal highway aid made available annually for urban systems, in fiscal year 1974 states will be able to return their allocations to the trust fund and obtain equivalent amounts for expenditures on capital from the treasury. This capability is to be extended and broadened in stages for FYs 1975 and 1976, with the end result that all available urban trust fund amounts can be expended as capital grants. For enumeration of the tremendous variety of federal-aid programs already in existence that apply to urban transportation, see: Automotive Safety Foundation, *Federal Aid for Urban Transportation* (Washington, D.C.: Automotive Safety Foundation, December, 1969).

5 See the recommendations in U.S., Department of Transportation and Department of Housing and Development, *Report to the Congress on Urban Transportation Policies and Activities* (Washington, D.C.: Government Printing Office, 1972).

6 Or the results of the programs, as in the case of San Francisco's BART, cannot as yet be evaluated fully.

7 For a powerful explanation of the problems with capital subsidy in transit, see: William B. Tye, "The Capital Grant as a Subsidy Device: The Case Study of Urban Mass Transportation," in *The Economics of Federal Subsidy Programs, Part 6—Transportation Subsidies, a Compendium of Papers Submitted to the Subcommittee on Priorities and Economy in Government of the Joint Economic Committee, 93d. Congress, 1st sess.* (Washington, D.C.: Government Printing Office, 1973), pp. 796-826.

8 For example, preliminary Wisconsin data prepared for the 1974 National Transportation Needs Study suggest a fiscal year 1974 "needs" figure of \$2.6 million in capital and \$2.9 million in operating expenditures for the state's transit systems. Calculations by the author.

Operating assistance is essential to effective use of the capital assistance provided in the plan for rapid-transit lines, buses, fringe parking, and bus priority treatment. A coordinated operating and capital assistance program will also permit the total cost of capital and operating alternatives to be evaluated without the bias of differing eligibility for different types of assistance.⁹

The prevailing local desire for operating, as well as capital, subsidy has, of course, been exhaustively examined at the federal level. The Nixon Administration's response, as set forth in the 1971 report, *Feasibility of Federal Assistance for Urban Mass Transportation Operating Costs*, suggested reliance on general and special revenue sharing programs.¹⁰ But new federal subsidies to meet operating deficits are not recommended. Nor is any broadening of UMTA programs to permit fund flexibility, as called for in the New York DOT *Master Plan*. It appears unlikely that the federal stance will change, despite continued efforts particularly in the Senate, or that federal executive (and congressional) opposition to operating subsidy will become ineffectual in the next several years.

This paper, then, is written under the assumption that current federal programs for capital subsidy of transit may be more heavily funded (and transit investments are also quite likely to be supported by highway trust-fund expenditures), yet the capital-intensive nature of these subsidies will not change. Thus we will have an environment of strong local demand for subsidy to meet operating deficits, together with a foreclosure of federal response.

In numerous cases subsidy demands are being met by the cities themselves by recourse to municipal tax revenues.¹¹ A more recent answer to these local demands has been entry of the states on the transit scene, and perhaps half the states now produce some variety of explicit transit subsidy. At least four have responded by subsidizing operating losses.¹² Another state—Wisconsin—is about to join their ranks. Now that state activity has begun, no doubt the spread of state operating subsidies will not stop at this point. How are these operating subsidies financed and administered? How desirable is this movement towards a broadening of subsidy by the states, and can any subsidy guidelines be suggested? The next section of this paper describes current state operating subsidy mechanisms and finances, as background information for further evaluations.

II. STATE MECHANISMS FOR OPERATING SUBSIDY

States have been slow to subsidize transit, perhaps because they have faced more legal limits upon their ability to respond to urban problems than

⁹ New York, Department of Transportation, *Statewide Master Plan for Transportation, Vol. I* (Albany, N.Y.: New York Department of Transportation, April, 1973), p. 18.

¹⁰ U.S., Department of Transportation, *op. cit.*, pp. 4-5.

¹¹ The number of cities so engaged totaled 81 in 1971. Hart, *op. cit.*, p. 10.

¹² *Ibid.*, pp. 6-10 suggests three states subsidized operating losses in 1973: California, New Jersey, and Pennsylvania. The results of a June, 1973, survey by the author indicates another state—Michigan—should be added to that list. For an extensive listing of local and state subsidy provisions as of 1969 see: W. G. Roesler and Peter S. Levi, "State Subsidies for Public Transit: An Overview of Current Legislation," *The Urban Lawyer*, IV, No. 1 (Winter, 1972), pp. 59-76.

do other units of government. Constitutional requirements that taxes be both uniform and equal have prevented the use of progressive income taxes; prohibitions on expenditures to political subdivisions or expenditures for certain purposes (such as purposes that benefit nonpublic institutions), debt limits, and referendum requirements have all made transit subsidy difficult for the states.¹⁸

However, some indication of change can be seen by reference to Table I, which illustrates current state provisions for transit operating subsidy. That table was prepared from the results of a June, 1973, survey undertaken by the Wisconsin Department of Transportation.

Table I distinguishes between the types of operating subsidy because, importantly, operating subsidies can take many forms. One type is a "deficit subsidy," where payments to the transit operator make up the difference (or some portion of the difference) between operating costs and operating revenues. A second type is an "output subsidy," where the payment is based on measures of service output. For example, some states support any losses incurred by an operator when fare cuts are offered to the elderly in an attempt to expand ridership. The third type is an "input subsidy," where payments are based on inputs to the production process (other than capital). A state might support the costs of transit marketing programs, or provide free managerial assistance to local operators. A particularly widespread type of input subsidy consists of state tax reduction or remission in the case of transit, either of specific excises such as fuel taxes, or through special provisions in the general statutes, such as lower income tax payments. Table I does not list all the many states that practice tax-reduction subsidy, first because it is by no means certain that the states using this type of subsidy do so as part of an explicit policy directed towards transit. For example, tax laws may subsidize an entire class of enterprises, in which transit happens to fall. Second, the absence of tax-reduction subsidy in a particular state may not be meaningful; that state could have a low proportion of transit services made available by private operators, compared with service provided by public authorities.

California

California stands out in two ways from the other states that provide operating subsidies. First, as Table I suggests, California's program is the largest in terms of expenditures, with \$138 million estimated in 1973, although under the terms of the state's legislation it is difficult to determine just what part of this amount goes for operating as opposed to capital subsidy. Also, California is the only state that has earmarked part of the receipts from a general tax source for transit use.

The State's Transportation Act of 1971 has given local transit authorities access to a transportation fund, which was created mainly for mass transit purposes. Revenue for the fund is generated by means of the 5% state sales tax (which was extended to motor fuels). Receipts from application of a 3% of the rate to taxable sales go for general state purposes, revenue result-

¹⁸ See Frank P. Grad, "The State's Capacity to Respond to Urban Problems: The State Constitution," in *The States and the Urban Crisis*, ed. by Alan K. Campbell (Englewood Cliffs, N.J.: Prentice-Hall, Inc., for the American Assembly, 1970), especially pp. 36-40.

STATE OPERATING SUBSIDIES FOR TRANSIT^a

State	Type of Operating Subsidy	Approximate Annual Amount of Subsidy (date)	Source of Subsidy Funds
California	Deficit ^b	\$138,000,000 ^b (1973 estimate)	State sales tax (revenue from rate of ¼ %)
Michigan	Deficit ^c	\$ 11,000,000 ^c (FY 1974)	State gasoline tax (2¢ per gallon)
New Jersey	Deficit	\$ 23,700,000 ^d (FY 1973)	General revenues
	Output	\$ 6,400,000 (FY 1974)	General revenues
Pennsylvania	Deficit	\$ 42,000,000 (FY 1973)	General revenues
	Output ^e	\$ 11,000,000 ^e (FY 1974)	General revenues
	Input	\$ 125,000 ^e (FY 1973)	General revenues
Wisconsin	Deficit	\$ 5,000,000 (FYs 1974-75)	General revenues

^a Source: Survey by the Wisconsin Department of Transportation, June, 1978. This table excludes states that subsidize transit operating costs solely by means of tax-reduction input subsidies.

^b These funds are allotted by the state to local transportation agencies subject to certain restrictions on how the funds are to be used. The \$138 million is the total cost of the program; the actual amount that is expended for deficit subsidies is unknown.

^c These funds are distributed to local governmental units. One half of the revenue collected in a General Transportation Fund is distributed to local authorities on the basis of population and miles of scheduled bus routes to help cover transit costs.

^d The amount covers both rail and bus transit, with \$19,400,000 going to railroad commuter service, and \$4,300,000 to bus transit.

^e Pays the full cost of senior citizen off-peak rides.

^f New program implemented July 1, 1973, budget estimated.

^g Consists of matching-fund grants for promotional expenditures.

TABLE I

ing from a 1% levy is returned to localities for their general funds, and revenue from the remaining ¼% goes to the transportation fund. Money from the fund is available on the basis of sales tax returns generated in each county, and the funds are to be allocated for the following purposes (in priority order):

1. Sufficient funds to permit recovery of the county's cost of administering the transportation fund;

2. Sufficient funds for the cost of transportation planning (including the expenses of statutorily-created regional-transportation-planning agencies, and entities created by interstate compact to perform continuing, comprehensive, transportation planning—permission is needed if these costs exceed 3% of the local share of funds);
3. In counties of more than 500,000 population, the balance of fund revenues must be used to pay approved claims for the following transit purposes:
 - a. Development and operation of a public transportation system, and
 - b. Public transportation research and demonstration projects.

These claims are subject to certain limitations (although exceptions are offered under special conditions):

- a. A minimum of 75% must be for capital expenditures (federal funds can be used for the remaining 25%);
- b. Claims must not constitute more than 50% of the total amount required for the costs of operation, capital, and debt service.¹⁴

California's experience under this legislation is too limited for exact figures to be available, but of \$138 million in sales tax receipts available for the above purposes, some lesser amount (likely less than half the total) can be expended for transit operating costs.

Michigan

This state's program, similar in many respects to that of California, also has a unique aspect. Michigan is the only state that finances its transit subsidy from the receipts of highway-user taxes.

The state's gas tax was increased by two cents in 1973, and a portion of the increase (estimated at \$11 million for the first full year of operation, FY 1974) made available for transit purposes. An initial distribution (\$810,000) was made from Michigan's new general transportation fund to local transportation agencies in the spring of 1973.

Direct aid to regions constituted half the distribution; the other half was directed by the state to capital improvement grants, demonstration programs, and improvements to highway-related mass transportation systems. The regional distribution was apportioned half according to the population of the area served by an eligible transportation agency, and half in accord with the total transit miles covered by the agency's buses on regularly scheduled routes.

New Jersey

In New Jersey both rail and bus transit are eligible for operating subsidy, rail under a program instituted in 1961 and budgeted at \$19,424,000

¹⁴ California, *Transportation Development Act*, Ch. 1400, Stat. 1971 (S.B. 325); Ch. 1408, Stat. 1972 (A. B. 968).

in 1973, and bus under a program begun in 1969 and having a 1973 budget of \$4,258,000. Financial assistance for rail operations covers the entire amount of loss from operations under contract to the state. Eligibility of bus operators for funds is determined by the state DOT's Bureau of Commuter Services, following review of applications. In the bus case the amount of subsidy is based on the deficit as certified by DOT accountants. Aid is usually dependent on a 25% local subsidy contribution from the county served.

New Jersey also employs output subsidies based on a one-third rate reduction for students and on off-peak fares at half price for senior citizens. The output subsidy programs have a \$6.4 million budget for fiscal year 1974.

Pennsylvania

Pennsylvania instituted its Purchase of Service Act in 1968. The state finances two-thirds of operating losses, with one-third to be made up by local government, for any transit company. Eligible losses are only those ascribed to approved services, with losses on unpatronized routes eliminated from the calculations. The deficit subsidy is limited to 3½ cents per passenger-mile.

Pennsylvania has the broadest set of operating subsidy programs of any state. Provisions for output subsidy cover the cost of transit service to senior citizens during off-peak hours, and a program for input subsidy yields matching funds for expenditures on transit promotion.

Wisconsin

The newest state operating subsidies will soon be provided in Wisconsin, under a budget passed in July, 1973, granting \$5 million over the 1974 and 1975 fiscal years in deficit payments. Only public bodies will be eligible for subsidy, with the exact amounts to be determined by the Secretary of Transportation following managerial review of transit finances and operations. At least one-third of the operating deficit is to be paid by local governments.

A companion program for planning and demonstration grants (\$2 million over the biennial period) has some chance of acting as an input or output subsidy program. Those funds are to be distributed generally . . . to plan or demonstrate the effect of improved mass transit service in reducing urban vehicle travel, meeting total urban transportation needs at minimum cost, and reducing urban highway and parking facility requirements."¹⁵

Summary

Certain central tendencies are visible among the five states reviewed. The dominant mechanism they employ is the deficit subsidy. New Jersey and Pennsylvania alone use the output subsidy form, and both states disburse the majority of their transit funds in the form of operating deficit payments. The input subsidy is utilized only by Pennsylvania and the sum involved is negligible. It is hard to discern all the reasons for relative popularity of the deficit subsidy from surveying a small number of rather diverse states. However, features that could prove important to state legislators include: the ease of

15 Wisconsin, Legislature, Assembly, 1973 Assembly Bill 300 (LRB-5500/1), p. 144.

administration of this subsidy type in its pure form (although auditing and reporting requirements, plus state-level scrutiny, can be detailed and expensive); the simplicity of the concept, and; the predictable certainty that use of the mechanism will result in short-run retention of service.

The total amount of operating subsidy on a per capita basis (1970 population) shows fairly close progression with the length of time the state has been subsidizing, ranging from approximately 57 cents for Wisconsin and \$1.24 for Michigan, through around \$3 for California, and to \$4.33 for New Jersey and \$4.50 in the case of Pennsylvania. Although the degree of progression over time could indicate a tendency for subsidization and deficits to increase hand-in-hand, it must be realized that New Jersey and Pennsylvania are densely-populated states, of a relatively "transit-dependent" nature, having substantial commuter rail networks.

Financing for operating subsidy is almost unanimously a matter of finding general-fund sources. In California's case a particular general-revenue instrument has been adopted, the sales tax. Only in the instance of Michigan are the general state sources of income and sales taxes rejected in favor of the excise or user tax on motor fuels.

The "typical" state, then, would approach the provision of operating subsidies through use of a deficit subsidy mechanism funded from general revenue sources, and financed at an annual rate of perhaps \$3 per capita.

III. GUIDELINES FOR THE DEVELOPMENT AND FINANCE OF OPERATING SUBSIDIES

Rationale for Subsidy

It is likely that more states will soon arrange to provide operating subsidies, in manners similar to programs already put in force by the five states I have described. Just how desirable this movement will be hinges on the extent to which state operating subsidies help fulfill the general objectives for which transit has begun to receive large sums of public money in the U.S. I would argue that operating subsidies can enhance goal attainment; but, first, what are these subsidy objectives?

As a general matter, subsidies often have a political nature. At least at first glance they seem to be applied for reasons other than encouraging efficient resource use. Such a political or equity goal for transit subsidy is suggested by Altshuler, who argues:

"The broad objective of transit subsidy policy should be to ensure a decent modicum of mobility to those prevented by extreme poverty, or by a combination of modest income and physical disablement (including old age), from moving freely about the metropolitan area by automobile or taxi."¹⁶

Mobility to the disadvantaged may appear solely an equity concern, but efficiency considerations nevertheless matter in the management of aids. Sub-

¹⁶ Alan A. Altshuler, "Transit Subsidies: By Whom, For Whom," *Journal of the American Institute of Planners*, XXXV, No. 2 (March, 1969), pp. 84-89.

sidy promoters wish to encourage the development or wide distribution of services that (by their own standards) are inadequately supplied, and perhaps improperly allocated, as well, among the populace. Motivated by either political, moral, or other philosophical reasons, the promoters' true success is measured by whether the subsidies generated through institutional processes require a minimum of resources while achieving the desired development. A chief objective of transit, then, taking into account delivery costs and achievements, may be stated as:

- (1) Income redistribution in favor of transit users, at minimum feasible administrative cost.¹⁷

Subsidies to particular modes of urban transportation, increasing modal output, can be justified just as well on resource allocation grounds.¹⁸ The efficiency argument would hold that individual choice of alternative modes does not reflect relevant social costs and benefits. Congestion, pollution, and locational externalities exist; moreover, public finance and price policies, even local regulatory practices, affect market distributions. In the absence of practical means to remove all these market distortions, especially the lack of acceptance of restrictions on the private automobile, a further subsidy objective is therefore:

- (2) The capture of positive externalities in the urban transport market.

Objectives (1) and (2) are better achieved through operating subsidy than by providing equal amounts to transit systems in capital grants. Quite simply, the amount of capital bias is reduced. The marginal operating cost expenditure is more productive than the marginal dollar applied to new capital in equipment or ways. Transit output can be increased, or the same level of services delivered, more efficiently through labor or managerial input supported by operating subsidy. For example, in direct support of objective (1), low-income transit users can be aided by output subsidies such as the New Jersey and Pennsylvania programs for senior citizens. Similar identifiable groups no doubt exist, such as welfare recipients, for whom transit tokens could be provided.¹⁹ Input subsidy, paying drivers' wages and vehicle operating costs for particular types of services—such as express buses to new suburban communities, and off-peak express runs to particular traffic generating points and special events—or the costs of educational programs and advertising, gives transit management the flexibility to apply their resources in non-traditional ways to generate extra traffic. Pennsylvania's matching grants

17 Although the objective is consumer subsidy, carried out to the point of decreasing returns, final incidence could be variable. Still, according to Shoup, "... transit subsidies are chiefly subsidies to the expense of earning an income." In practice, output subsidies at least are often: "... offered only to users who pass means tests or who travel at times and in modes that imply low income. The aim then is to increase the real income of the poor or to increase incentive to work by reducing one cost of working, commuting." Carl S. Shoup, *Public Finance* (Chicago: Aldine Publishing Co., 1969), p. 199.

18 For a basic, early discussion see George M. Smerk, *Urban Transportation: The Federal Role* (Bloomington, Ind.: Indiana University Press), pp. 226-31.

19 It can be argued that welfare is improved more directly by cash grants to individuals compared with grants of services, but service grants are sometimes more politically acceptable than consumer sovereignty and can be directed toward eliminated social cost effects. "Consumer subsidies are employed to redistribute disposable income in a society that is not willing to accord the recipients the freedom of choice that accompanies a cash grant." Shoup, *op. cit.*, p. 152.

for promotional expenditures exemplifies such a program. Travel generation, substituting for urban automobile traffic or inducing new travel that is transit-dependent, suggests both objectives, but particularly objective (2), procuring the positive externalities of superior urban mass transportation.

Development Guidelines

The above discussion suggests that additional operating subsidies should be developed with special attention to providing managerial flexibility in producing transit services. Indeed, state operating subsidies might best be regarded as elements in a comprehensive program of distributing transportation purchasing power to local bodies, for local direction. Deficit subsidy certainly promotes flexibility (although the support of deficits would ideally be contingent on evidence of output results), but no less so than input and output subsidy. The latter have the further advantage of retaining some degree of efficiency-incentive in transit.²⁰ Efficiency can be promoted, too, through requiring local matching funds for any state subsidy. Of course, subsidies should not be granted without the requirement of reporting and account systems; otherwise, without active subsidy management, it might be possible for a subsidy intended to expand transit services to result in expanding factor rewards in the industry, in excess of marginal factor productivity. A sliding-scale for local matching fund ratios can be employed as a management tool.²¹ Finally, the flexibility that operating subsidy allows should be employed by grant recipients to meet transit objectives by wide distribution of service benefits (yielding vertical equity among users and potential users of equal income), and directed toward projects that will bring benefits regressively distributed according to family income.

State Financial Mechanisms

The discussion to this point has neglected the topic of instruments for financing operating subsidy. For transit systems still under private ownership, and not receiving public support, the only available mechanism for operating support to particular activities is internal cross-subsidy among users (for example, from peak-period commuters to off-peak riders). This is increasingly untenable as a sole mechanism for achieving transit goals, although it will no doubt be practiced by operators in conjunction with other subsidies.

The major tax instruments for operating subsidy are general taxation, specific general taxes, and specific excises—in particular highway user taxes. Just as meeting the objective of income re-distribution calls for production of benefits that are regressively distributed, financing those benefits requires the use of progressive taxation. The choice between general revenue funding and the use of a specific general tax (such as the sales tax as used by California) therefore depends on the progressivity of the tax. In this regard, the pro-

²⁰ Transit, as a marketable good, enjoys the benefits of market rationing. This advantage is discarded in zero-fare schemes, yet can be retained in operating subsidy programs.

²¹ The bothersome problem of retaining incentive while subsidizing deficits could perhaps be attacked also by the use of "regulatory-lag" in subsidy payment. Deficit payments made according to past-period losses, or on the basis of a past level and cost of service together with disallowance of losses resulting from service expansion with very low patronage yields or cost expansion beyond state-wide norms, can be expected to have some efficiency effect on management.

gressive personal income tax would be the preferred instrument, with general revenues taking second place.

To the extent that state taxes are less progressive than federal taxes, operating subsidies would best be financed at the federal level. Local revenue-sharing receipts would be excellent for this purpose. However, to prevent geographic misallocation through cross-subsidy from rural to urban areas, the superior tax would be a progressive levy that is raised locally, in the area served by the transit system. In the absence of federal action that would provide operating subsidies, and the lack of broad-based, progressive taxes at the local level, state taxation of a progressive nature is a reasonable source of revenue. State taxation is most applicable in highly urbanized states that levy progressive personal income taxes.

Highway user taxes are often suggested as the superior revenue source for transit subsidy.²² The diversion of fuel taxes or license fees for transit application might be justified on the grounds that motor vehicle use is underpriced, and occasions social costs; the net social benefits of using funds for transit purposes could be higher than for any highway application. Surely the objective of supporting the secondary effects of transit usage goes hand-in-hand with the taxation of automobiles.

The argument is appealing, but flounders on two grounds: (1) whenever the net social benefits of using funds for transit instead of highways are not positive, diversion creates misallocation among transport modes, and; (2) highway user fees (as is now the case in Michigan) or the sales tax (as in sive tax instruments. Operating subsidy for transit should therefore be supported at the state level by progressive taxation, rather than through use of highway user fees (as is now the case in Michigan) or the sales tax (as in California). Only by applying the receipts from progressive taxation to projects and activities whose benefits are distributed regressively can the basic objectives of transit subsidy be achieved.

IV. CONCLUSION

The trend that has begun, as documented in this paper, toward state provision of transit operating subsidy, seems likely to accelerate as long as no federal action is forthcoming. Operating subsidy, despite the incentive problems it creates, is desirable as a counter to the relative capital abundance generated by federal capital subsidy programs under the Urban Mass Transportation Act. The goal should be to make operating subsidy an integral part of comprehensive urban transportation aid programs throughout the U.S.

A survey of the five states now paying all or part of the net operating deficits for local transit suggests as most typical a deficit subsidy mechanism funded from general revenue sources. Additional operating subsidies should contribute to the basic transit objectives of (1) income redistribution in favor of transit users, at minimum feasible administrative cost, and; (2) the capture of positive externalities in the urban transport market. The subsidy mechan-

²² See the argument in Altshuler, *op. cit.*, pp. 86-87. For a rebuttal and detailed discussion see John C. Spychalaki, "The Diversion of Motor Vehicle-Related Tax Revenues to Urban Mass Transport: A Critique of Its Economic Tenability," *Transportation Journal*, 9, No. 3 (Spring, 1970), pp. 44-50.

ism, it should be noted, generally serves as a practical alternative to the taxation of negative externalities; it is more politically acceptable to subsidize competitors to the automobile which has produced those externalities, than it is to reduce auto activity by direct taxation.

The development of operating subsidy should take care to permit a great deal of flexibility in expenditure of grants or aids, while retaining a degree of efficiency incentive for transit management. That management itself can be expected to expand transit activity and ridership, producing net social benefits, when supported by comprehensive subsidy, although review of subsidized expenditures may be needed to prevent over-payment to the factors of production. However, to ensure maximum attainment of the income redistribution objective, not only must the benefits of transit service be distributed regressively—the method of subsidy finance should be progressive. The desired instrument for financing transit subsidies at the state level is therefore a progressive income tax, and the often-discussed diversion of motor-vehicle user fees is much less powerful in attaining the basic objective of redistribution in favor of transit riders, despite its obvious disincentive effects in the long-run on auto usage.

As state-level operating subsidies are extended, there will be constant need of objective, well-defined guidelines for the provision of subsidy, in order to obtain the maximum in social benefits from the expenditure of public funds. Public administrators face a major task in devising and applying these subsidy guidelines.