Abridgment

Analysis of State Transit Funding Methodologies

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For several years, there has been growing pressure for state governments to become involved in the provision of technical and financial assistance to transit systems in their states. Many states have already responded with formation of state departments of transportation, legislation to assist transit, and assumption of responsibility to improve transit services through coordinated, comprehensive planning and financial assistance (1).

For those states not yet involved in providing assistance for transit operations, a major question is how to allocate those funds, given that there are various objectives to be met. This paper reviews state funding methods that may result in efficient, effective, and equitable transit service.

REVIEW OF STATE FUNDING OF TRANSIT

The following summary is based on a survey of 22 states that have departments of transportation. Each responded to a questionnaire concerning state assistance for public transit. The states were asked to identify the purpose, modes, recipients, allocation formulas, funding sources, and other relevant information related to state transit funding. Some of the information obtained is given in Table 1 (2).

The states explicitly allow the following uses of state funds:

Use	Number of States	Use	Number of States
Capital expenditures	17	Planning	6
Technical studies	10	Evaluation	3
Operating costs	9	Promotion	2
Demonstrations	7		

Almost every state surveyed uses state funds as matching funds for federal capital grants and to assist in the purchase of other transit property. Very few have allocated state funds for the evaluation or promotion of transit service. Eligible modes include fixed-route, demand-responsive, jitney, taxi, and rail. Most states provide assistance to fixed-route transit systems (17), and only a few states make funds available to jitney or taxi services (if sponsored by a transit authority). About half of the states (10) fund rail, and about one-third of the states (7) fund demand-responsive systems. As expected, the publicly owned systems were most eligible for funds (16).

ALLOCATION CRITERIA

The criteria by which states allocate funds for public transit vary considerably. The first major distinction in funding is between that allocated to areas and that allocated to systems. California, for example, allocates transit funds to an area based on that area's population. Usually those areas are planning subdivisions (county, multicounty, or metropolitan areas). State funds are allocated to systems primarily according to whether the funds are intended for operating or capital assistance.

The most common form of state assistance is for capital equipment and related transit property purchases. The amount of state contribution is directly related to the absence of federal money. A state will contribute from 25 to 100 percent of the nonfederal share. If a project or system is not requesting or is not eligible for federal assistance, then the state will provide usually 15 to 100 percent of the match.

If the state provides operating assistance, allocation is usually based on the system's deficit or the system's performance. Eligibility varies by ownership and type of service. Maryland completely subsidizes the operating deficit of the Baltimore public transit system and others on a discretionary basis; Delaware completely subsidizes a special system for agency-approved elderly and handicapped, and the state of New Jersey completely subsidizes the operating deficit of its public transit systems. Connecticut has two basic goals: to maintain existing transportation services and to provide incentives

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Table 1. State funding of public transit.

State	Uses	Annual Amount ($)	Modes	Recipients	Allocation Criteria
California	Capital, operation, technical study, planning, promotion, demonstration	94 000 000	Fixed-route, dial-a-ride, rail	Public system, private nonprofit, private system, government	Population
Connecticut	Capital, operation, technical study, planning, promotion, demonstration	14 000 000	Fixed-route, dial-a-ride, rail	Public system, private nonprofit, urban	50 to 100 percent of deficit
Delaware	Capital, operation, technical study	4 000 000	Fixed-route	Public system, government	80 percent for DART
Florida	Capital, technical study, planning, evaluation, demonstration	6 700 000	Fixed-route, dial-a-ride, jitney, rail	Public system, public agency, government, urban, rural	50 percent non-federal
Georgia	Capital, technical study, promotion	400 000	Fixed-route	Public system	50 percent non-federal
Hawaii	Capital	300 000	Fixed-route	Government	
Illinois	Capital, operation, technical study, evaluation, promotion	171 000 000	Fixed-route, rail	Public system, private nonprofit, private system, urban, rural	2/3 of deficit
Kentucky	Technical study, planning, promotion	200 000		Public agency, government, urban, rural	50 percent non-federal
Maryland	Capital, operation		Fixed-route	Public system, government	100 percent for Baltimore
Massachusetts	Capital, operation	67 000 000	Fixed-route, rail	Public system, private nonprofit, private system, urban, rural	50 percent of deficit
Michigan	Capital, operation, promotion, demonstration	20 000 000	Fixed-route, dial-a-ride	Public system, government, urban	Vehicle-kilometers, population
New Jersey	Capital, operation	49 000 000	Fixed-route, dial-a-ride, rail	Public system, private nonprofit, private system, urban, rural	50 percent capital, 100 percent operation
New York	Capital, operation	103 000 000	Fixed-route, dial-a-ride, rail	Public system, private system, public agency, urban	Vehicle-kilometers, passengers
Ohio	Capital, demonstration	2 800 000	Fixed-route	Public system, private nonprofit	25 percent non-federal
Pennsylvania	Capital, operation, technical study, planning, promotion, demonstration	90 000 000	Fixed-route, dial-a-ride, rail	Public system, public agency, government, urban, rural	50 percent capital, 2/3 of operation
Tennessee	Capital, technical study, promotion	250 000	Fixed-route	Public system, public agency, urban	25 to 50 percent of deficit
Virginia	Capital, technical study	5 400 000	Fixed-route	Public system	
Wisconsin	Operation, demonstration	7 000 000	Fixed-route, dial-a-ride	Public system, private nonprofit, private system, public agency, government, urban	2/3 of deficit

for improving service. It subsidizes 100 percent of the operating deficit for a basic service and up to 50 percent for services above the basic level.

The other major criterion by a state allocates operating assistance for transit based on the system's service or performance. Michigan allocates 25 percent of its funds based on the number of transit kilometers of the system (3 demand-responsive kilometers are equivalent to 1 fixed-route transit kilometer). The allocation of another 25 percent is based on the system's eligible population (in the service area). New York State provides assistance based on mode, number of passengers, and number of vehicle-kilometers. Pennsylvania subsidizes operating assistance based on 3 cents/passenger-kilometer (5 cents/passenger-mile) rather than on vehicle-kilometers. This was chosen because of variations in trip length. (The total sum of Pennsylvania's subsidy may not exceed two-thirds of the operating deficit.)

ALLOCATION LIMITATIONS

In general, very few states place requirements on the allocation of state funds. In fact, only five of the 22 states identified special requirements governing who receives state assistance, how much, or for what purpose. California requires that 15 percent of the state transit funds go for capital purchases. Further, it requires that the total amount an area receives be equal to sales tax revenue generated from that area. Michigan requires that there be half fares for elderly and handicapped, that there be a state-approved transportation plan, and that school trips not be eligible for reimbursement. In Wisconsin, a system must have been in existence before August 5, 1973, and the recipient must be an eligible public body.

FUNDING SOURCES

There are seven sources of state funding for transit:

Source	States
General sales tax	California, Illinois
Bonds	Connecticut, Illinois, Massachusetts, New Jersey
Transportation fund or general revenues	Connecticut, Kentucky, Maryland, Massachusetts, Pennsylvania, Wisconsin
Gasoline tax	Florida, Hawaii, Maryland, Michigan
Motor vehicle registration	Illinois, Maryland
Cigarette tax	Massachusetts
Lottery	Pennsylvania

In Pennsylvania, funds from the lottery are used to subsidize the free-fare program for the elderly.

The most common sources of funds for public transportation are general revenues or a general transportation fund and gasoline tax (3). No single source is sufficient, and therefore states rely on a combination of the sources identified. In general, most of the sources of funding represent a form of cross subsidy from automobile to transit and from higher income to lower income.

SUMMARY

The results of the survey suggest the following trends.

1. Those states that have departments of transportation already have or have proposed legislation to

obtain state funds from existing tax sources or from general revenue for transit assistance.

2. Depending on the state, these funds may be used for capital assistance, operating assistance, demonstration, planning, evaluation, or technical study.
3. State funding for transit varies from $30 000 to more than $170 million.
4. Fixed-route transit systems are most likely to receive assistance, and private taxi services are least likely.
5. State assistance is provided almost exclusively to urban systems and less often to rural or intercity systems.
6. The major criterion by which states allocate their funds for capital assistance is usually the absence or presence of federal funding.
7. The proportion a state will provide for operating assistance depends on the system's deficit or performance. States contribute between 50 and 100 percent of a system's deficit, subsidize the system at a fixed rate for each passenger or vehicle-kilometer, or do both.
8. The transportation goals most stressed are the desire to maintain existing levels of service and fares and to provide an incentive for improved service.

ALTERNATIVE ALLOCATION METHODOLOGIES

If it is assumed that state operating assistance is warranted, three possible approaches might be taken. First, the state might provide direct or unfettered assistance whereby funds are simply passed through to the local governmental bodies with the assumption that the money will be spent to improve the transit service. The second approach is to regulate the provision of transit services and require the provision of minimum levels of service in order to obtain state funding. The final method is to provide a "carrot on a stick" or incentive program whereby local areas can obtain more money by improving the performance of their transit system. Based on a review of the potential of these alternative approaches and the methods actually used by the state, the incentive method is the most desirable because it provides a means of ensuring that various transit goals and objectives may eventually be met.

Obviously, state operating assistance is only one type of financial assistance important to the initiation, provision, or improvement of transit service. Other types of financial assistance for capital expenditures, planning, evaluation, and demonstrations are also important. Also, state-level funding alone is not sufficient to ensure equitable, efficient, or effective transit service. However, through the incentive program, measures of equity, efficiency, and effectiveness may be built into the allocation methodology so that future improvements are in fact guided through the funding mechanism (4).

After a very preliminary review of various allocation criteria based on population, percentage of deficits, passenger trips, route-kilometers, vehicle-kilometers, and various ratios such as passengers per vehicle-kilometer, the following initial observations may be drawn.

1. The allocation criterion of passenger trips is the only single criterion that may result in greater equity, efficiency, and effectiveness of service.
2. The bases of population and percentage of deficit appear, by some measures, to be the least desirable criteria by which to allocate operating assistance, although politically they may be among the easiest to initiate.
3. The criteria that are stated in terms of the trips per capita, kilometers per capita, kilometers per service area, or other combinations seem to have very few advantages over the single criteria of route-kilometers, vehicle-kilometers, or passenger trips.
4. No single criterion will be both appropriate to increasing equity, efficiency, and effectiveness and practical and politically acceptable for allocating funds.
5. Any allocation criterion or combination of criteria should include the requirement that the assistance be used first to achieve minimum standards and then to improve service above those standards.

It is suggested that an allocation methodology should consist of more than one criterion. The criteria should include a simple measure of system performance or supply; measures of demand that are sensitive to the type of demand by person, trip purpose, or some similar characteristic; and some measure that reflects system efficiency. There would necessarily be some weighting of these various parts of the formula. That weighting should not be uniform among states but should be adjusted to reflect local conditions.

CONCLUSION

Review of the allocation methods currently in use by state departments of transportation indicates that most of the methods were probably initiated because of political acceptability rather than their effectiveness in addressing particular transportation objectives. There is little question that in many cases any type of financial assistance will help, but it may be possible to accomplish more than simply bailing transit systems out of financial crises. Through the proper selection of an allocation formula, it may be possible to guide or encourage many desired improvements. It is clear that more research is needed in this area.

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