price is $1.50/gal for 1980, $1.75/gal for 1981, and $2.00/gal after 1981, which establishes maximum tax rates of $0.12/gal, $0.14/gal, and $0.16/gal, respectively. A tax-rate floor is not specified. Also enacted was an increase in the vehicle registration fee of about 25 percent depending on the class of vehicle.

Massachusetts

Effective August 1, 1980, the motor fuel-tax rate is to be reestablished quarterly at 10 percent of the average wholesale price of motor fuel. No tax-rate floor or ceiling was enacted. The law lacks specificity, so the Massachusetts commissioner of revenue will suggest changes at the next session of the legislature.

Nebraska

Effective October 1, 1980, the motor fuel-tax rate is to include a surcharge of 2 percent of the average price the Nebraska state government pays for motor fuel computed on a pennies-per-gallon basis. The surcharge rate is to be effective through fiscal year 1981 and then is to be adjusted by the State Board of Equalization based on the additional state funds required to fund appropriation levels established by the legislature. In addition, the law establishes a $0.01/gal increase in the motor fuel tax; the receipts are to be divided equally between cities and counties.

Evaluation of Indexed Highway Taxes

Indexed highway tax measures ought to be carefully evaluated prior to being enacted. Some fail to satisfy the reasons for their development. Typical problems are as follows:

1. Revenues do not relate to need,
2. Revenues are unpredictable,
3. Funding levels change without public or legislative review,
4. Tax structure is unbalanced, and
5. Tax rates are difficult to establish.

The most serious problem with indexed highway taxes is that they may automatically change tax levels without reference to specific documented highway needs.

When motor fuel taxes are indexed to the price of motor fuel, state highway programs are no longer related to needs but to prices of petroleum established by foreign governments.

In enacting indexed motor fuel-tax measures, state legislatures assume that motor fuel prices change in direct proportion to the costs of the highway program. However, this has not been the case, particularly in 1980, when motor fuel prices were constant while highway program costs soared.

And there is no sure way to predict petroleum prices, especially with the instability that characterizes the world's petroleum supply. If highway taxes are indexed to unpredictable motor fuel prices, state highway administrators are unable to estimate future revenues. This difficulty is serious because motor fuel taxes produce two-thirds of highway revenues collected by the states.

With taxes tied to economic indices, the public and legislatures lose some control of highway program spending. Program justification is less necessary. Funding adequacy and tax affordability become irrelevant.

Another problem of indexed highway taxes is that they may be difficult to establish and understand. Taxes related to the price of motor fuel are difficult to establish because there is no agreed-upon average wholesale or retail price for the various types of motor fuel. Prices change daily and vary within each state. Depending on the law, distributors or dealers are required to submit records on price and sales volumes for each type of fuel so government officials can compute the prescribed average price per gallon needed to calculate the new tax rate. Distributors or dealers then must use the computed tax rate to calculate taxes due and the taxes to pass on to consumers. Added bookkeeping and confusion may result.

Indexed Motor Fuel-Tax Safeguards

To reduce problems, most indexed motor fuel-tax measures have incorporated safeguards. Establishing maximum and minimum limits for the tax rate provides some measure of legislative control of the tax and the highway program. Retaining the pennies-per-gallon tax basis ensures that the administrative burden of tax collection will not be enlarged. Limiting tax-rate changes to once a year will avoid confusion and keep the tax collection burden within reasonable bounds. Although none of the indexed highway tax measures calls for periodic legislative review, such a feature might help to ensure that revenues are related to needs and program objectives.

In summary, the above evaluation shows that indexed taxes are not a problem-free substitute for the traditional methods of highway finance, based on periodic assessment of highway needs and resources accompanied by legislative review, debate, and action.

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Abridgment

Transit Performance Measures and Local Objectives: State-Level Policy Considerations

DAVID J. FORKENBROCK

With increased involvement by the states in financing public transportation, the issue has arisen whether states should determine the standards by which the quality of transit service is measured. Either the performance measures on which these standards are based can be used to define a minimum quality

level to qualify for state funds or they may actually constitute the basis for distributing state assistance. In this study, several possible criteria for distributing assistance at the state level are contemplated. Some of them are in conflict; it would not be possible to apply all of them simultaneously. The purpose of this analysis is to explicate the policy implications of alternative allocation criteria.

With increased involvement by the states in financing public transportation, the issue has arisen whether states should determine the standards by which the quality of transit service is measured. Either the performance measures on which these standards are based can be used to define a minimum quality level necessary to qualify for state funds or they may actually constitute the basis for distributing state assistance. The crux of the issue seems to be whether state-level objectives should be pursued through the disbursement of available resources or whether the local community should be allowed to provide the level and form of service it chooses and have the state act to facilitate the provision of this service.

In this paper we will contemplate several possible criteria for distributing assistance at the state level. The criteria call for quite different roles for the state. Some of these criteria are in conflict; it would not be possible to apply all of them simultaneously. The purpose of this analysis is to explicate the policy implications of alternative allocation criteria.

ALTERNATIVE ALLOCATION CRITERIA

A rather wide range of criteria that govern the allocation of transit assistance exists among the states (1-3). These divergent criteria are a manifestation of differing philosophies as to the purposes that should be served by this assistance. Five alternative allocation criteria will be discussed and then the implications of each will be assessed.

Efficiency Maximization

The strongest reason for implementing an allocation mechanism based on performance measures is to promote economic efficiency. That is, funds are distributed within the state so as to achieve the highest overall level of service, however defined, possible with a given pool of resources. Systems that perform better according to the criterion measures receive more funds; an incentive is thereby created to maximize the output of these measures. Unless the state assigns a different value for different sorts of passengers, the purest output measure for efficiency maximization is ridership (or passenger miles).

Uniform Service Quality

Just as the Interstate highway system aspires to provide coverage that is essentially uniform in similar types of locations, a possible criterion for allocating transit assistance is to move toward an equal quality of service (again, however defined) in all similar areas within the state. This means that service quality within larger urban areas would be consistent, as would quality within small urban areas or rural areas. Some attempt is necessary to reconcile these different service environments to achieve comparable quality among them. All else being equal, this criterion would involve distributing more funds where the costs of providing transit service are higher.

Equal Funding for Similar-Sized Areas

Until now the distribution of federal Section 5 operating assistance has been based on population and population density. A major reason for originally adopting population as the basis for allocating federal assistance was its political acceptability. The implication of this criterion is that similar-sized communities should be afforded the same opportunity to provide transit service. If among similar-sized communities (a) the demand for transit can be assumed to be uniform, (b) the costs of providing service are inherently similar, and (c) all systems are operated with equal efficiency, this criterion will result in both an efficient allocation of resources and a uniform quality of service. If, however, any of these conditions is not present, the allocation will not be efficient and service quality will vary among communities of similar size.

Meeting the Needs of the Transportation-Disadvantaged

A fourth criterion involves allocating available resources to provide the greatest amount of service to those that have the strongest need for transit. If need is defined as the inverse of opportunity (i.e., a lack of transportation options for trips important to the individual), this criterion implies that service is not configured to maximize ridership per se but to best serve the transportation-disadvantaged. Areas that have high incidences of poverty, for example, may receive more assistance than relatively affluent areas in which travel options are generally greater.

Responsiveness to Local Preferences

A final criterion for distributing state transit assistance is to maximize transit's ability to meet locally determined needs, desires, and preferences. This criterion is predicated on the reasoning that within a pluralistic society it is not realistic or desirable for state officials to determine the purposes for which transit is provided at the local level. Performance measures often favor the development of services that generate, for example, high ridership figures, regardless of whether these services contribute to local objectives for transit. Under this criterion greater emphasis is placed on the planning process than on service measures. The state may elect to issue planning guidelines to ensure the adequacy of transit planning at the local level. Available funds are awarded on the basis of locally determined needs and the community's willingness to contribute its share toward defraying the costs associated with providing the desired services.

EVALUATION OF ALTERNATIVE CRITERIA

The five different allocation philosophies call for quite different roles for the states regarding performance measures. If the objective is to maximize economic efficiency, then the state must use performance measures in distributing available funds. The principal advantage of this criterion is that the taxpayers may get the "biggest bang for the buck." Its greatest shortcoming is an almost complete insensitivity to differences in (a) environments within which the various systems that are competing for funds operate and (b) local desires, needs, and preferences for transit. To maximize the amount of state funding received, a community must concentrate on increasing the output of the performance measures dictated by the state, regardless of whether doing so promotes the local objectives for which transit is being provided.

Allocating transit assistance so as to achieve

uniform service quality, another criterion based on performance measures, has the advantage of taking into account the variations in cost that arise in different cities of similar population. More direct involvement by the state is needed with this criterion to ensure that endless funds are not poured into an extremely inefficient (or low-demand) transit system in the hope of elevating its service quality to some state-imposed standard. If state funds are limited, areas that have a strong demand for transit will be penalized, whereas areas that are less interested in transit will have it forced on them, to a degree.

As was noted earlier, distributing transit assistance on the basis of population is valid only if demand is uniform, costs are similar, and efficiency does not vary across the communities vying for state funds. Since all these conditions are highly unlikely, this sort of allocation criterion is of doubtful merit. Simply because of its service-area population, a poorly managed, low-quality, and rarely used system may receive more funds than a high-quality system that meets its community's needs.

If more socially oriented purposes for transit are the basis for resource allocation, then performance as such is less easily compared across systems. Distributing assistance on the basis of objective measures of need essentially involves replacing performance measures with demographic and socioeconomic measures. This criterion, although it appeals to the extent that transit is viewed as a service for the transportation-disadvantaged, ignores other factors that affect the cost of providing service (e.g., the physical configuration of the service area or how well the system is managed). Need measures also are imperfectly related to actual demand. It is possible that fewer trips may be generated in low-income areas, for example, than in middle-class areas in which there is heavy daily commuter traffic. Presumably, under this criterion a higher value is ascribed to transit trips by those who have no alternative means of conveyance.

At greatest variance with the use of performance measures to allocate transit assistance is a planning-oriented approach geared toward establishing transit service that satisfies local objectives. Contracted objectives growing out of an adopted plan become the basis for receiving state funds. This approach has the clear advantage of affording the opportunity to provide services that the local community feels are most important. It also enables the community to decide how much transit it is willing to pay for, given some state contribution. From the state's perspective, shortcomings include the possibility that service quality could vary considerably across the state and that an economically efficient allocation of resources is not assured.

RECONCILING ALTERNATIVE STRATEGIES: A POLICY RECOMMENDATION

In the current era of scarce funds, state legislatures are taking a good look at appropriations for all purposes. Being able to demonstrate that the method of distributing state transit assistance promotes an efficient use of limited resources is of great importance in winning legislative support. A totally discretionary approach, whereby local objectives are the basis for funding applications, provides less of a guarantee that funds will be used to do the most good from the state's perspective. On the other hand, legislators are loath to ignore political decisions made within their districts.

Both the foregoing evaluation and political considerations seem to speak for a balance between a procedure that results in an efficient allocation of funds and one that enables transit to meet locally determined objectives. To enable both these attributes to be incorporated into a state assistance program, it is useful to distinguish between developmental funding and that for sustenance.

Developmental Funding

Roughly a dozen states have established transit development planning guidelines to specify the procedure to be followed in requesting funds for initiating or improving service. Guidelines developed for the state of Iowa (4,5) require that citizens be involved in the formulation and ranking of social objectives for transit. Several alternatives are then devised, all of which are geared toward attaining these objectives but which vary in scale and hence cost. Local decision makers must balance a desire for transit service with the costs to be borne locally when they make their selection. The chosen alternative becomes the basis for a grant application to the state. The application entails a request for capital assistance and the necessary operating funds to initiate new or to expand existing services.

Sustenance Funding

Regardless of the level of its transit development, a community's immediate concern is likely to be financing existing services. From the state's perspective, as noted earlier, it is desirable to award more funds to those systems that account for more output, such as ridership, revenue miles, or passenger miles. From the local perspective, it is essential that state funding be predictable; whatever the level of transit development, the community must be certain that sufficient assistance will be forthcoming each year to enable service to continue. Performance-based funding is perhaps the best single method of balancing these two perspectives. A system can accurately estimate the funding it will receive by examining its performance statistics, and the state can encourage operating efficiency.

CONCLUSION

A series of criteria for distributing transit assistance at the state level has been examined. Each of the criteria may have desirable characteristics, but in every case there are drawbacks. If we recognize the current need for efficiency in public expenditures and the importance of tailoring transit to meet locally derived social objectives, a two-component approach seems to be called for. To enable a transit system's development in line with local needs, desires, and preferences, a participatory planning process should be followed. The product of this process is a request for developmental assistance to allow the desired system to reach fruition. Transit systems at any level of development could be awarded sustenance funds on the basis of performance measures. As a system develops, its performance statistics improve, qualifying it for additional sustenance funds.

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Funding Dade County's Transportation Improvement Program: The Citizens' Role

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Metropolitan Dade County, Florida, is currently implementing one of the most ambitious public transportation improvement programs in the United States. This program, which consists of a 20.5-mile elevated rapid transit system, a downtown people mover, and more than 1000 buses, is being funded by using bond funds passed by the voters of Dade County long before the current resurgent interest in public transportation. In many ways the success of the county's transportation improvement program is founded on the strong role citizens have had in supporting public transportation financing in Dade County. The 1970s brought citizen participation for funding transportation projects in metropolitan Dade County to the forefront. Two key referenda and thousands of citizens' meetings have provided clear direction for the county's future transportation system. Public officials and planners in Dade County were confronted with the realities of the past both nationally and locally in regard to the public's involvement in the planning of the major transportation projects. In the light of the experiences in cities in which there had been major delays or financial losses due to citizen opposition to planned transportation projects, Dade County approached the 1970s with the reality that the public must be fully involved in making funding decisions for the county's balanced transportation system.

Recognizing the need for improved transportation facilities in order to accommodate its rapidly growing population, Dade County, Florida, began a series of planning studies aimed at identifying the type of transportation system the county needed. The Miami Urban Area Transportation Study (MUATS), which had begun in 1964 and was completed in 1969, culminated in the passage of two transportation bond issues (in November 1972) that totalled $260 million. These two issues consisted of a unified transportation system that emphasized public transportation ($132.5 million) and a street and safety improvement program ($113.5 million) as part of 10 issues that involved a broad range of public improvement projects. The two transportation issues evolved from a series of public hearings conducted as part of the MUATS process in which citizens had an opportunity to express themselves on the various elements studied in MUATS.

Initially, the MUATS long-range transportation study focused on a major expansion of the county's highway network that would add nine new expressways and on the development of a medium-capacity transit system. In the late 1960s that plan was taken to the community in a series of public hearings in which strong opposition developed to the expanded expressway system. Strong support surfaced from almost every major citizen group in the county for the transit portion of the study and the need to improve the existing highway network to make better use of what currently existed. Thus, almost three years prior to a financing plan for the improved transportation system, citizen involvement began molding Dade County's future transportation system.

Following the adoption of the Decade of Progress (DOP) bond issue in 1972, a second significant referendum was held in March 1978. Because a citizens' group called Stop Transit Over People (STOP) had gathered more than 10 000 signatures from registered voters, the repeal of the 1972 bond issue was placed on the ballot as a referendum at a time when the county was preparing the complete final design of portions of the rapid transit system and beginning construction. This repeal attempt was defeated by a narrow margin. However, this referendum was perhaps the most interesting example of the key role that citizens can play in getting funding for transportation programs passed.

PARTICIPANTS

Supporters

As the 1972 DOP referendum approached, it became clear that a strong grass-roots citizens' group was needed to help publicize the 10 bond issues being offered to the public by the county manager and commissioners. By mid-October, the County Committee, a group of citizens concerned about the future direction of Dade County, announced their formation and endorsed all 10 bond issues. Table 1 provides a breakdown of the issues endorsed by the County Committee. Members of the County Committee included prominent black leaders; representatives of the two leading newspapers in the community, the Miami Herald and the Miami News; industrialists and businessmen from throughout Dade County; and other individuals from key community groups. The League of Women Voters was the first group to officially endorse specifically the rapid transit provision in DOP. The league did not join the County Committee; however, it made its own effort, directed primarily at the rapid transit issue.

Support for DOP came from almost every area of the community. On October 29, 1972, the mayor of Miami announced support for the entire bond issue while at the same time the city of Coral Gables Times strongly endorsed the rapid transit bond issue, calling it the most important issue. The South Dade Chamber of Commerce unanimously supported all 10 proposals as did the Miami Herald, the Miami News, and local newspapers in Miami Beach and South Dade.

It became clear in 1972 that the supporters of