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# **Transit Agency Use of Private Sector Strategies for Commuter Transportation**

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## ABSTRACT

Demand for public transit services in most urban areas is increasingly concentrated in the peak period. However, peak period service is significantly more expensive to the transit agency than its other services and usually produces larger deficits. Faced with pressures to maintain or increase commuter services, yet also to control rapidly escalating deficits, transit agencies are in need of strategies which improve the cost-effectiveness of commuter transportation. Several innovative service strategies which make use of the private sector--service contracting, service turnovers, vanpooling--have considerable potential to achieve this objective, and are alternatives to traditional transit agency approaches to problem solving.

Based on a study of 8 transit agencies in 8 diverse metropolitan areas, all with some significant private sector activity in commuter transportation, this paper examines transit agency utilization of these innovative private sector strategies. It determines the reasons these agencies have or have not adopted these strategies, and identifies the major barriers to their more widespread utilization.

The initial incentive to consider non-traditional approaches comes from fiscal and/or service pressures which require some change in the status quo, but whether private sector strategies are actually utilized depends largely on four factors: 1) management interest in non-traditional approaches, 2) analyses which demonstrate the utility of innovative approaches, 3) discretionary rather than dedicated local subsidies, and 4) the ability of local government officials to influence

the transit agency's service and budget decisions. The main barriers to innovation are traditional management orientation, labor constraints posed by federal legislation and/or local union contracts, and subsidy and decision making arrangements which give the agency no strong incentive to improve the cost-effectiveness of its different types of services.

Transit Agency Use of Private Sector  
Strategies for Commuter Transportation

I. Introduction

The provision of peak period transportation services has historically been a major focus of the United State's urban transit operators. Over the past two decades, as transit's market share has declined, the peak period orientation of urban transit has increased. "Choice" riders have all but abandoned transit for off-peak travel, and consequently peak service has become the most important source of ridership for most urban transit systems. In addition to the relatively high utilization of peak period transit services, changing conditions in many urban areas throughout the country have generated more demand for all collective forms of commuter services. The inability of street and highway capacity to keep pace with increasing traffic has resulted in rising levels of congestion on major commute routes, particularly in areas of rapid growth. Rapidly increasing energy costs (which affect the purchase price of autos as well as gasoline prices) have made the private auto an increasingly expensive means of getting to work. Moreover, the growth of employment in many central city areas has created parking shortages as well as local congestion problems. Because of these conditions, public demand for additional commuter services is being expressed to many public institutions, and particularly to public transit agencies.

Unfortunately, however, peak period transportation poses as much a problem for public transit providers as it does for commuters. While the

peak period is the key source of transit ridership, it is also the greatest source of transit deficits. Thus, as the peak orientation of public transit has increased, so has the need for subsidies. The nature of the peak problem has been well described elsewhere (Oram, 1979), and thus need only be briefly reviewed here.

Basically, the peak problem results from two factors. First, the size of the organization is determined by the maximum service requirements. As the peak-to-base differential increases, a relatively higher percentage of labor and vehicle stock is underutilized for most of the service day. Although administrative staff, maintenance and garage facilities, vehicles and drivers are determined by the volume of peak service provided, the revenue generating potential of these inputs exists for only a few hours per day. Thus the peak orientation leads to a low level of productivity in public transit service. Secondly, existing transit union work rules add to the expense of providing peak service through spread time limitations, overtime provisions, and minimum pay time requirements. These work rules result in drivers being paid for many more hours than actually worked in peak service. Thus the labor cost per unit of service is higher in the peak than in the off-peak.

These two factors are further complicated by the more general cost and efficiency problems of the urban transit industry. The monopolistic structure of transit providers and the lack of efficiency incentives generated by formula-based subsidy mechanisms have allowed a rapid escalation of transit service costs. At the same time, fare revenues have not come close to keeping pace with these costs. Consequently,

transit deficits have reached a critical magnitude. Available subsidies are no longer sufficient to cover the deficit for many transit operators, and as federal operating subsidies are withdrawn, this problem will become both more serious and more widespread.

The transit industry is faced with a difficult challenge because of the conflicting pressures of supply and demand. On the one hand, peak period transit in its present form is inefficient and too costly. On the other hand, the demand for peak services is increasing, particularly in high growth areas. If this demand is to be met in a cost-effective fashion, alternatives to traditional peak transit services must be developed.

The primary focus of this paper is on innovative peak period service strategies which utilize the private sector in some way. These innovative alternatives are examined in terms of the conditions necessary for their success, the motivations for promoting them, and the obstacles which may prevent their implementation.

Research results presented here are based on case studies of eight public transit agencies located in eight metropolitan areas around the country. The case studies included extensive interviews with transit agency management and union officials, local planning agencies, and private sector service providers. In addition to the interviews, data were gathered from a variety of transit agency and planning agency documents and records. The research took place in the spring and summer of 1982, as part of an UMTA-sponsored project on the evaluation of private sector provided services. The eight areas were selected on the

basis of the extent and variety of private sector activity in commuter service.

## II. Strategies for reducing the peak service problem for transit providers

There are a number of alternative strategies available to transit providers which can reduce the peak service problem. Of primary interest are service contracts with private bus companies, turnovers of service on an unsubsidized basis, transit agency actions which facilitate the provision of unsubsidized private commuter bus services, and transit agency vanpooling programs. Each of these strategies require the transit agency to adopt a different approach to peak period service organization and provision, and some entail substantial institutional change in the service delivery system. Transit agencies also can respond to the peak period problem by using more traditional strategies which, while typically easier to implement, also have less potential to provide a viable long term solution to the problem, as they cannot simultaneously improve service and increase cost-effectiveness.

### A. Traditional Strategies

Traditional solutions consist of strategies which reduce the deficit of peak services, but which do not change the institutional structure of service provision. That is, the public transit provider remains the sole provider of peak services within its service area and reduces the deficit either by decreasing service costs or increasing fare revenues. One method of achieving service cost reductions is through more efficient use



of labor in the peak period, for example, by utilizing a higher proportion of part-time labor, or by negotiating work rule changes. The cost savings potential of work rule changes and the use of part-time labor are highly sensitive to the peak-to-base ratio and length of time between the AM and PM peak periods (Chomitz & Lave, 1981). On the average, such strategies can reduce labor cost up to 8 percent, provided that work rule changes are not compensated with higher wage rates.

A less traditional strategy is that of loadshedding, of simply reducing the volume of peak service. Resulting cost savings can be significant, particularly if the most costly pieces of peak service, those runs for which drivers are paid the largest spreadtime or overtime penalties, are eliminated. Because of the public support of peak services, however, such service cut-backs are frequently a political impossibility.

Another relatively novel strategy, albeit still within the traditional framework, is to target fare increases at peak period users. Such fare increases are appropriate for equity as well as efficiency reasons, since recent studies indicate that long distance peak users are subsidized by short distance central city off-peak users (Cervero, 1980). However, this approach fails to address the problem of escalating service costs. Relying on fare increases over the long term would require repeated hikes simply in order to keep pace with rising service costs. Moreover, the range of fares over which demand is inelastic is unknown. Large fare increases could lead to revenue losses, if demand becomes elastic at higher fare levels.

## B. Innovative Strategies

The use of part-time drivers, peak period service reductions, and selective fare increases all hold some potential for alleviating the peak period problem. However, they do not attack the root cause of the problem, namely that most transit agencies have excessively high cost structures for peak service which even the use of part time drivers will not completely overcome. In the current economic climate this makes it very difficult to expand commuter services even when demand is present.

### Contracting with Private Providers

Perhaps the most radical of the innovative strategies is for the transit agency to contract with a private provider for fixed route or subscription bus service. The motivation for doing so is to take advantage of the lower costs of privately provided service. The practice of contracting is well established in the public transit field. Demand-responsive services are provided by private contractors in several areas of the country, and many public agencies have maintenance or management contracts with the private sector as well. Private operators have lower labor costs than public operators: wage rates are lower and work rule restrictions such as spread time penalties are minimal. Moreover, private operators are frequently able to interline commute service with their charter business, thus utilizing labor and vehicles throughout the day and reducing the unit cost of service. A study done in Southern California indicated that current subsidies for 22 peak-period only bus routes could be reduced by 90 percent by contracting the

services to private bus companies (Southern California Association of Governments, 1982).

The most critical issue associated with private contracting is whether existing transit agency service can be turned over to a private contractor if subsidies are involved. Such a service shift clearly involves Section 13(c) of the Urban Mass Transportation Act, which protects public transit workers from being harmed by federally supported service changes. Thus if a transit agency contracts a route to a private provider it would not be able to eliminate jobs as a direct result of this change. From a strictly legal point of view, however, there would be no 13(c) issue if only state or local subsidies are involved.

A much less problematic strategy is to utilize private providers for subsidized service expansions, although fiscal constraints are severely limiting service increases for most transit operators. In this case, 13(c) labor protection provisions do not apply because service increases would not adversely affect existing transit employees. However, some transit union contracts have limitations on the amount of contracting permitted. If the relaxation of such restrictions must be compensated with additional benefits to labor, the potential cost savings of such a strategy is accordingly reduced.

#### Turning Service Over to Private Providers

A second strategy transit agencies can utilize for involving private bus companies in commuter transportation is to turnover some commuter routes to the private sector to be operated without subsidy. In a number of metropolitan areas private bus operators are still active in the

commuter field, which suggests that there is an interest in providing this kind of service. However, despite the lower costs of private operators, there often would be a need for fare increases to ensure profitability and the fare elasticities of commuters are uncertain. Only certain routes would be suitable for this strategy, probably the long distance express routes that already have a relatively good revenue return. Many other routes could not be operated profitably by private operators without some kind of subsidy.

The 13(c) issue would be less relevant for this strategy since no subsidies are involved. But some union contracts have clauses mandating that the size of the bargaining unit can not be decreased. In this case, the strategy becomes somewhat less attractive, as labor inputs removed from peak period operations must be deployed during the off-peak, thereby reducing the subsidy savings.

#### Facilitating Private Sector Services

The transit agency can also strengthen the private sector so that it is then capable of meeting demands for peak service expansion or demands for new kinds of services. For instance, the transit agency can act as a broker, passing along requests for worksite service to a private bus company that is willing to do subscription service. The emphasis is on meeting the needs of particular market segments, rather than maintaining transit agency control.

A major impediment to private sector expansion is a lack of equipment. Low profit margins make equipment purchasing a risky proposition when entering a new market. The transit agency can alleviate

this problem by leasing new or extra equipment to private companies. Leasing can also help support existing services because the private operators often lack the capital to update deteriorating bus fleets.

The transit agency can also support private sector activities within the context of their own programs. Private services can be actively marketed in conjunction with public services. Park-and-ride lots can be built for or opened up to passengers on privately operated express routes.

Although none of these actions has direct cost savings, they increase the peak services available. They are also supportive of some of the other strategies which require a strong private sector bus industry.

#### Ridesharing Services

Another strategy transit agencies can use to increase the total supply of commuter services is to support or sponsor a ridesharing program. This can involve providing a matching service for prospective carpools and vanpools, organizing vanpools via third party providers, or providing vehicles for vanpools and administering a vanpool program. One significant incentive for providing ridesharing programs is that they can be largely financed from non-transit funding sources. The transit agency thus has the opportunity to expand services without taking subsidy support away from existing services.

Vanpooling is a more cost-effective form of commuter transportation than regular transit service. A vanpool is not initiated until the number of people required to fill the van (between 10 and 15) has been brought together. Because vanpool fares are usually set so that all costs except administrative overhead are covered, the subsidies involved

in vanpooling are quite small. Vanpooling also provides a means for targeting service to very specific markets, and since the only large capital investment (the van) is easily transferred, pools can be dissolved or reorganized as members change jobs or move.

Sponsoring a vanpool program can make it possible for transit agencies to provide commuter service in suburban areas where residences and employment centers are spatially dispersed, and yet avoid the large operating deficits that regular fixed route service would generate. Vanpooling programs can also provide a means for increasing the overall cost-effectiveness of the transit agency if high deficit express bus services are replaced by vanpools. Again, as with private provider contracting, transit service replacements may generate 13(c) problems if federal subsidies are involved.

Although vanpooling (and other ridesharing support services) has distinct economic advantages, it can present problems for the transit agency. There is a potential conflict with regular transit service if vanpools are utilized instead of transit services. As a result, some transit agencies avoid providing ridesharing services to commuters who can be served by transit. In this way, service competition is avoided. However, under such conditions the effectiveness of the ridesharing program may be adversely affected. This also raises the question of whether an institution with a vested interest in one form of commuter service can effectively market other services.

### III. The Transit Agencies and Their Environment

#### A. Environmental Influences on Peak Period Strategies

When considering the transit agencies' perceptions of the peak period problem and their response to it, it is necessary to first delineate the environment within which they operate. Four kinds of factors are important in this respect.

First, the overall transportation environment determines to some extent the potential demand for peak period public transportation services. For example, the amount of highway congestion, the land use patterns prevailing in the region (e.g. concentrated or dispersed employment), and the current usage of public transit all give some indication of whether transit is now, or is likely to be in the future, a central element in commuter transportation.

Second, the characteristics of the transit agency itself affect its response to peak period problems. A transit agency with a low peak-to-base ratio (below 1.5, for example) cannot be really said to have a peak period problem in the sense meant by Oram. Other characteristics which affect the agencies' perceptions and responses are its size, the amount of time it has been in the public sector, its cost structure, its institutional autonomy, and the role which other actors expect it to play in commuter transportation.

Third, the economic environment within which the agency operates is of major importance in its outlook. Transit agencies differ widely in the source of their funds, the amount of their deficits, the availability of funding, and the degree to which they are accountable to their funding

sources. The current administration's plans to eliminate federal operating subsidies will place further fiscal pressures on those agencies which depend heavily on federal funds.

Fourth, the private sector service environment determines to some extent what non-traditional options are available to the transit agency. The extent of private bus operations and vanpooling programs, the number of park-and-ride lots available for commuter services, and the involvement of private employers in organizing ridesharing and transit services all influence the ability of the transit agency to innovate in commuter transportation.

Table 1 and the following section summarize these four factors for the eight transit agencies in the study.

#### B. Transit Agencies and Their Environment

The eight transit agencies are located in eight urban areas with quite distinctive transportation needs. The three largest regions--Los Angeles, Boston and Houston--all have congestion problems, particularly in the core areas. Houston's problems are especially acute since it has a rapidly growing population, inadequate freeways with numerous bottleneck sections, and three major employment centers. Public transit is important in Boston with a 50 percent share of work trips but the modal split is very low in the other two areas. Santa Clara County and the Golden Gate transit districts share the congestion problems common to the Bay Area but with different local patterns. Golden Gate Transit has a 30 percent share of work trips, most of which go into San Francisco. Santa Clara has a rapidly growing industrial area along the northern



TABLE 1

Transit Agency	ConnDOT	Pentran	Tidewater	Golden Gate	MBTA	MTA	SCRTD	Santa Clara
<b>URBAN ENVIRONMENT</b>								
Major City	Hartford	Newport News	Norfolk	Northern SF Bay Area	Boston	Houston	Los Angeles	San Jose
Population (in millions)	.73	.27	.80	.61	2.8	2.5	7.2	1.3
Congestion	Low	Low	Low	High	High	High	High	High
Geographic Bottlenecks	No	No	Yes	Yes	Yes	No	No	No
Mode Split-Work Trips	(CBD only)			(Gol.Gate Br.)	(CBD only)			
Transit	31%	5.2%	<5%	28%	50%	5.2%	7%	3%
Rideshare	21%			49%	34%		18%	22%
Auto Alone	48%	} 94.8%	} 95+%	33%	16%	} 94.8%	75%	75%
<b>TRANSIT AGENCY CHARACTERISTICS</b>								
Date Public Subsidy Began	1972	mid-70s	mid-70s	1973	1918	(regional) 1979	1958	1972
# Buses	234	100	175	230	1137	400	2821	346
# Passengers/Yr (in millions)	18.1	N/A	14.2	10.1	(Bus only) 118.3	39.0	257.0	35
Peak/Base	2.4	4.5	<2.0	5.3	2.38	2.45	2.0	1.5
Express as % of Total Service	13% of pass.	12% of miles	5% of miles	40% of pass.	8% of routes	20% of pass.	25% of miles	14% of miles
<b>ECONOMIC ENVIRONMENT</b>								
Source of Revenue					(All modes)		(Before sales tax approved)	
% Fares	46%	35%	45%	50%	22%	18%	39%	9%
% Local	0%	30%	21%	28%	28%	51%	0%	55%
% State	27%	3%	5%	16%	41%	8%	45%	30%
% Federal	27%	32%	29%	5%	9%	23%	16%	6%
Local Funding Arrangement	(State) general funds	general funds	general funds	general and dedicated bridge tolls	dedicated property tax	dedicated sales tax as of 7/82	dedicated sales tax	dedicated sales tax
<b>PRIVATE SECTOR PEAK SERVICE ENVIRONMENT</b>								
Private Bus Companies								
# subsidized operations	6 routes	none	none	27 Club buses	none	13 routes	1 route	none
# unsubsidized operations	1 route	54 buses	90-100 buses	none	200 buses	none	100 buses	none
Van pools in Metropolitan Area	274	200	400	218	225	1017	733	27

freeways but transit accounts for a low percentage of work trips. Pentran and Tidewater Transit serve adjacent areas in Newport News and Norfolk, Virginia. There are few traffic problems except for some congestion around the major worksites. Transit is not very important except for worktrips to the shipyards and naval facilities. Hartford also has minor congestion problems except in the CBD, where most employment is concentrated. Transit does serve a large percent of CBD worktrips.

The transit agencies in Boston and Los Angeles are quite old, serve their areas well and have a strong commuter orientation as shown in moderately high peak to base ratios. In contrast, the regional transit district in Houston was formed in 1979 and is still developing. Its peak orientation is also quite strong. All the other transit agencies began in the 1970s but only Santa Clara's is still expanding. Golden Gate and Pentran have extremely high peak-to-base ratios while Hartford's is moderately high. Santa Clara and Tidewater have a low peak orientation.

These eight transit agencies represent a diversity of funding arrangements and a wide range of economic environments. Boston and Los Angeles were both facing run-away costs and unfunded deficits in states which had experienced taxpayers' revolts against increasing property taxes. System-wide the MBTA obtains only about 20 percent of its revenue from passenger fares and Los Angeles recoups about 40 percent. In Boston the towns and cities in the transit district provide a major portion of the subsidy money (30 percent) but their share is legislated by the state and entails no direct control over service provision. In Los Angeles

there was no direct local contribution until a 1/2 cent sales tax was recently validated by the courts. State funds are channeled through the Los Angeles County Transportation Commission which has a planning function but has little discretionary power over the state funds, although much more over the new sales tax subsidies. Both transit agencies have responded to the economic pressures by recent fare increases and service cutbacks, although both were rescinded by SCRTD when the sales tax was validated.

Hartford, Norfolk, Newport News and Golden Gate have experienced financial problems as well but not of the crisis proportions comparable to Los Angeles and Boston. Hartford and Golden Gate receive the bulk of their financing from the state government without any direct local contribution, although Golden Gate controls toll money collected from the Golden Gate Bridge. Golden Gate's state transit subsidies are channeled through a planning organization, but the transit agency is primarily responsible for service performance to its own board of directors. As a state agency, the Hartford Division of ConnDOT is accountable to the state legislature for all aspects of its operations. Although this control is not regularly exercised, some funding carries mandated service requirements. Both systems get a good return from fares, 46 percent for Hartford and 50 percent for Golden Gate. Hartford is experiencing some state mandated service cutbacks while Golden Gate is a stable system.

Newport News and Norfolk receive a substantial portion of their funding from the towns and cities in their districts, but the contribution is not mandated by law. As a result the transit agencies

are directly accountable to the local entities which receive the service. Pentran and Tidewater receive 35 percent and 50 percent of their revenue from passenger fares respectively. There are large pressures locally to be efficient and keep costs down. Norfolk has an on-going evaluation program that eliminates marginal bus routes. Newport News is more crisis oriented.

The transit agencies in Santa Clara, Houston, and now Los Angeles are experiencing a period of economic prosperity. All three areas have a dedicated sales tax with few restrictions on what services will be provided. The large local contributions do create an implicit emphasis on keeping fares low as reflected in the amount of revenue that comes from fares--10 percent in Santa Clara and less than 20 percent in Houston. Across-the-board fare reductions were required by the tax legislation in Los Angeles. These tax revenues require essentially no accountability to other government agencies, except in Los Angeles. Even there, the SCRTD is largely autonomous in how it uses at least part of the sales tax revenues. All 3 systems are contemplating major capital expansions--HOV lanes and light rail in Houston and Santa Clara and light and heavy rail in Los Angeles.

#### C. Innovative Agencies and the Peak Period

The first step towards accepting the innovative approach to problem solving is the recognition that the peak period is a major source of deficits. Having acknowledged this, the agency may then undertake the task of developing innovative alternatives, including tailoring service

to particular markets, ending the transit agency monopoly over service provision within its district, and coordinating with the private sector.

The 8 transit agencies divide into two groups based upon whether the transit agency recognized the peak period problem or not. Although the utilization of innovative strategies by the transit agency does not always directly correspond to peak period perceptions, the overall approach to transit management does. Table 2 summarizes each agency's perception of the peak problem and the kinds of innovative services it provides or otherwise encourages.

Hartford, Norfolk, Newport News and Golden Gate all perceive the peak period as a major source of deficits. A crucial feature of this perception has been detailed studies of costs allocated to time periods (peak/non-peak), routes and different kinds of service. Such studies can provide evidence that sways the fiscally conservative who may otherwise be reluctant to support non-traditional approaches to service delivery. On-going cost allocation monitoring can also guide service decisions. Three of the innovative systems have done cost allocation studies while Pentran is in the middle of doing one.

The most common innovative addition to the transit agency's service has been ridesharing, particularly vanpools. All of the innovative agencies sponsor vanpools although not all sponsor carpooling. These agencies do not fear ridesharing as competition but see it as a supplement to current service. For instance, in Connecticut vanpools will be a key service as the longest express routes are phased out. These agencies also use innovative approaches in meeting the needs of

TABLE 2

## Peak Period Services and Plans

City	Hartford	Newport News	Norfolk	Northern Bay Area	Boston	Houston	Los Angeles	San Jose
Transit Agency	(ConnDOT)	(Pentran)	(Tidewater)	(Golden Gate)	(MBTA)	(MTA)	(SCRTD)	(Santa Clara)
Perceives Peak Problem	yes	yes	yes	yes	no	no	no	no
Cost Allocation Study	yes	i.p.	yes	yes	partial	no	partial	i.p.
Vanpool Program	yes	yes	yes	yes	no	yes	no	no <sup>2</sup>
Contract with private sector	yes	yes	yes <sup>1</sup>	yes	yes <sup>1</sup>	yes	no	no
Facilitate Private Bus	yes	yes	yes	no	no <sup>3</sup>	no	no	no
Turn routes over to private sector without subsidy	i.p.	yes	no	no	1 route	no	no	no
Plans for peak service	cut peak, eliminate express	contract services, turn over services to private sector	maintain low peak/base ratio	reduce/eliminate Club Bus subsidies	general service cuts, part-time labor, fare increases, union restrictions	expand peak/express lines, end contracting, rail system	rail system, part-time labor	expand peak service, highway construction, light rail

i.p. = in planning stages/in progress

1 Not for commuter services but others.

2 Participates in area's vanpool program but doesn't use it to increase peak period supply of transit services.

3 State DOT leases buses to private carriers.

non-commuter groups as well. Norfolk has subsidized both jitney and dial-a-ride services provided by private contractors, and Pentran provides a special service to the E&H which uses a taxi firm as one of the contractors.

The innovative agencies are willing to coordinate with the private sector. In their ride-sharing programs they organize or promote employer sponsored vanpools. Hartford and Golden Gate contract with private bus companies with the recognition that these companies can more efficiently provide certain services, such as express service. In Hartford six different companies are paid guaranteed hourly rates for their express service. ConnDOT has also built park-and-ride lots for these routes. Golden Gate Transit began subsidizing a club bus (subscription bus service) program in the early 1970s, and now contracts with 4 bus companies for 27 bus runs daily. The innovative agencies also facilitate the involvement of private bus companies in commuter transportation even when the agency does not retain control over service decisions as it does when contracting. ConnDOT has built park-and-ride lots for non-subsidized commuter routes and does passenger surveys as well for private bus companies. Tidewater buys buses that it then leases to the private bus operators, and Pentran also participates in this bus leasing program.

All four agencies also are hopeful that additional services can be turned over to the private sector without subsidies. Pentran was encouraged by the willingness of a private provider to pick up a service to a neighboring county which the transit agency decided to terminate.

ConnDOT anticipates that where express routes are terminated, unsubsidized vanpools and private bus operations will step in to serve the market. And Golden Gate Transit would like to eliminate subsidies altogether from the club bus program, and reconstitute it as an owner-operator service (with the clubs owning the buses) similar to vanpooling.

#### D. Traditional Agencies and the Peak Period

The four traditional transit agencies--Boston, Houston, Los Angeles and Santa Clara--do not see the peak period as a major economic problem. In both Houston and San Jose there is satisfaction with the local service but a definite feeling that there is not enough peak service. In Boston there is some recognition that the peak probably costs more, but the spiralling costs are blamed more on labor problems than on service organization factors. During its recent fiscal crisis the SCRTD proposed general service cutbacks, particularly at night and on weekends. The peak did not receive any special attention despite its disproportionate contribution to deficits.

None of these transit agencies had conducted a full cost study (to date) by route and time period so the actual costs of different services are difficult to document. An internal pricing of 14 routes at the MBTA revealed that some express routes have a higher rate of return from fares but it did not directly compare costs of the peak to other time periods. At Santa Clara and Houston MTA, costs have not been an important issue since there is plenty of money available from the local sales tax. In Los Angeles and Boston, it is recognized that reducing certain peak



service may reduce the overall deficit but there is a reluctance to pare back services that produce many riders and are politically visible.

All of the traditional agencies charge more for express service but there is no differential for peak service. As noted earlier, the extensive local contributions in all four areas have carried an expectation that fares will be kept low.

Only Houston has a ridesharing program and it is very small-- consisting of 19 vans at this point. Except for administrative costs the vanpools are unsubsidized. As a result they cannot compete with the private company vans, which are subsidized, or other transit services. There are no plans for vanpools to become a major service offered by the Houston MTA, and the current program was initiated only because of political pressures from areas which do not presently receive MTA bus service.

Houston is also the only one of the traditional transit agencies to contract with private carriers for commuter service. But rather than being a strategy for ameliorating peak costs, contracting is a limited term measure for expanding peak service until the MTA can increase its own stock of equipment. Nor has cost effectiveness been a prime consideration in choosing contractors. The union contract limits contracting to 10% of the overall services, although under the current "emergency" circumstances it exceeds that.

The issue of turning some routes over to private carriers without subsidies has been bandied about in both Los Angeles and Boston. Within the transit agencies there is considerable resistance to the very

concept. Although it is conceded that there would be some cost savings, there is a general belief that express routes produce relatively more revenue than other services. To give routes to private carriers, especially viable routes, would cause a deterioration in overall performance. The initiative for service turnover seems to have come from outside the transit agencies in both cases. In Boston, one route was experimentally given to a private carrier. The owner of the bus company claims to have increased ridership but overall he is losing money. The experiment has not been considered a success.

In both cities the idea was given the most serious consideration during times of fiscal crisis. As soon as the transit sales tax was validated by the courts, the SCRTD dropped all negotiations with the private carriers. In Boston the idea has been resurrected a number of times. The most recent was last spring when a supplemental budget was needed to finance a growing deficit. Although there was talk of turning over routes to private carriers, a traditional solution was found. There were general service cutbacks and an increased subsidy from the towns and cities in the service district. The idea was laid to rest once again.

#### IV. What Accounts for Transit Agency Responses?

Five of the eight transit agencies--Tidewater, Golden Gate, Pentran, ConnDOT, and Houston MTA--have made at least a moderate commitment to innovative responses to the commuter transportation situation. While the use of innovative strategies does not necessarily imply an innovative attitude on the part of these transit agencies--Houston MTA being the

prime example--it does distinguish them from the transit agencies in Boston, Los Angeles, and Santa Clara, none of whom have demonstrated any serious interest in the use of non-traditional strategies. In fact, the SCRTD provides work site service with its own equipment and labor force, presumably exacerbating the already high costs of its peak period operations, and Santa Clara County Transit is seeking to expand its express service offerings. As for the MBTA, which arguably has the worst financial situation of any of these agencies, its main response to the high costs of peak period service is to hire part time labor, even though recent state legislation seemingly gives it the ability to pursue service contracting.

The question, of course, is what accounts for these different degrees of willingness and ability to utilize innovative strategies for providing commuter transportation. Table 3 identifies several factors which affect whether transit agencies will pursue innovative strategies or not. While a different set of factors influenced each of the agencies in our sample, there was a definite pattern to the factors which were present or absent when an agency utilized innovative strategies or did not.

Fiscal and/or service pressures were invariably the prerequisites to innovative approaches to problem solving, although it must be emphasized that they do not guarantee a non-traditional response. Rather, pressures to expand peak service or, more typically, to reduce projected deficits (and hence the needed subsidy), require an agency to consider how it will achieve these objectives. Without such pressures the organization will almost inevitably maintain the status quo for its service delivery

TABLE 3

## Factors Affecting Transit Agency Utilization of Innovative Strategies

<u>Innovation Affecting Factor</u>	<u>Salient Characteristics of Factor</u>
Fiscal situation	Does transit agency face sufficiently severe fiscal pressures that service reductions are necessary to balance budget?
Service situation	Is transit agency under pressure to provide additional peak services or to otherwise take lead role in solving commuter transportation problems?
Management orientation	Traditional attitude of favoring monopolistic service organization and delivery, or willing to relax control over service delivery system.
Subsidy arrangements	Is local source of subsidy dedicated exclusively to transit, or is it discretionary in nature?
Decision making arrangements for transit agency	Are transit agency policy makers connected directly to governing units which fund agency or not? Do policy makers control allocation of funds to different types of services?
Rational analysis	Cost studies of peak period services which demonstrate that transit agency supplied service is more expensive than alternative methods of service delivery.
Transit's role in commuter transportation	Transit's contribution to work travel and to control of peak period congestion, its importance to downtown access, and the degree to which transit is viewed as the solution to commuter problems.
Political situation of transit agency	External pressures on agency to undertake new services or responsibilities, to reduce subsidy, to maintain low fares. Strong political orientation towards the status quo or towards change.
Labor situation	Does current labor agreement prohibit service contracting or otherwise severely restrict its use? Strength of transit union in local politics.
Agency characteristics	Length of time agency has been in public sector. Organizational autonomy of agency--do other institutions have ability to determine its outputs?

system. When such pressures are present, however, an opportunity, and perhaps a motivation, is created to examine alternatives to traditional problem solving responses. Whether this opportunity will in fact lead to an innovative approach utilizing the private sector appears to be a function of four other factors, namely management attitudes, subsidy arrangements, decision making arrangements, and rational analysis.

Top management of a transit agency need not be particularly innovative in orientation for an innovative response to occur, but it must at least be open to non-traditional modes of problem solving. Tidewater Transit is virtually unique among American transit agencies in its unhesitant embrace of innovative problem solving approaches. Nonetheless, Golden Gate Transit, with much more traditional top management, has also been a commuter transportation innovator because its management has been willing to experiment with strategies developed by the agency's ridesharing division. Similarly, Pentran has had several traditionally oriented general managers, but the ridesharing unit has developed support for various commuter service initiatives. The management of ConnDOT at one point favored conventional approaches to peak period service delivery, but was persuaded by internal cost studies that its own services were quite expensive and should be deemphasized in favor of other alternatives (such as vanpooling) in the future.

When an agency is under pressure to solve a fiscal or service problem, rational analysis can be a major factor in promoting an innovative response. Of particular importance are studies which demonstrate, at least conceptually, that the costs of an innovative

strategy are less than a conventional response, or that a non-traditional approach to service delivery can make available a commuter service which could not be provided otherwise due to management objectives (such as not worsening the peak-to-base ratio) or subsidy constraints. Golden Gate Transit's ridesharing division has used studies of this nature to win internal support for its initiatives. Cost studies were instrumental in changing ConnDOT's attitudes towards the desirability of agency-provided express bus services. In addition, both Tidewater Transit and Pentran are well aware that peak period service is too expensive to be expanded--and in some cases even maintained--in any way other than through non-traditional alternatives.

Subsidy and decision making arrangements have a crucial effect on whether transit policy makers will be motivated to investigate and support non-traditional approaches to commuter transportation services. In particular, when non-federal subsidy sources are discretionary, i.e. are not dedicated exclusively to transit, and when policy makers are members of governmental units with a direct financial stake in the agency's cost and service performance, the prospects for policy level support (and even advocacy) of innovative strategies are much greater than when these factors are not present. Under such circumstances policy makers and their constituents have a direct interest in the most cost-effective forms of service delivery possible, as subsidy savings can be diverted to other government services or lower taxes. Tidewater, Pentran, Golden Gate, and ConnDOT all utilize discretionary sources of subsidy, and in each case the agency's policy makers must account to

their constituents as to how the funds are spent. Therefore, the policy makers, and through them the management, have a compelling interest in maximizing the cost-effectiveness of the services for which the agency is responsible.

In addition, it bears noting that the politics of transit are in part the politics of service delivery. If good service is good politics, then strategies which reduce service costs and thereby allow additional services to be produced, or at least the current level of service to be maintained, are also politically desirable. Thus the policy makers for Tidewater and Pentran have had no difficulty accepting proposals to provide commuter services, as well as other transit services, through mechanisms other than the transit agency's own vehicles and drivers. In the case of Pentran, in fact, the policy makers were the initial advocates of such thinking. It must be emphasized that direct control of local subsidies is the key to the development of such attitudes on the part of policy makers.

The opposite side of the coin is a non-innovative response in a situation where fiscal pressures or service concerns require the transit agency to do something beyond the status quo. The MBTA and the SCRTD have both faced severe fiscal crises within the past year, but in neither case did it lead to agency support of non-traditional strategies. Rather, these two transit agencies opted to raise fares and reduce service rather than contract out services or turn them over to the private sector without subsidy.

Both organizationally and politically the MBTA and the SCRTD are shielded against the winds of change. Management believes that it should control and provide all transit services in its sphere of influence and has a quasi-monopoly on funds for service provision. Politically, the two agencies derive much of their influence from their contribution to commuter transportation, and the peak period is the only time of day when a significant portion of the ridership is composed of middle class citizens. With dedicated funding sources and a decision making system in which local policy makers lack the authority to connect service decisions with subsidy allocations, there is little incentive or ability for policy makers to intervene into the agency's internal decision making process. As already noted, the internal bias is to continue in the traditional service delivery mode.

While the SCRTD and the MBTA have fiscal incentives to investigate innovative approaches to peak period service delivery, neither the Houston MTA nor Santa Clara County Transit is experiencing fiscal pressures. Although Santa Clara's policy makers, the County Board of Supervisors, are in a position to control subsidies by influencing service decisions, the dedicated transit funding gives them no incentive to do so. In fact, the Board seems determined to embark on a course which will result in much more money being spent on transit, notably by constructing light rail lines and generally expanding transit service. This will cause operating deficits to increase very substantially in the future should the plans be implemented.



The policy makers for transit in Houston seem equally committed to spending far more money on transit than is now the case, again primarily through the creation of a rail transit system which almost inevitably will require large amounts of operating subsidies. In the short run, however, the Houston transit agency has been forced to utilize non-traditional means of providing additional peak services, notably contracting and vanpooling. This does not mean that the MTA is particularly innovative, however. The agency adopted these two strategies because it is under intense pressure to increase the amount of peak period bus service in order to help cope with Houston's serious traffic congestion problem. Moreover, the vanpool program is small and the MTA expects to terminate the subcontracting arrangements--which now represent about 25 percent of peak service--as soon as the transit agency can build up its fleet to takeover the service. Thus, with a dedicated funding source and decision making arrangements which give local jurisdictions no opportunity to save money by substituting more cost-effective services for conventional transit operations, the Houston transit agency is just waiting to reimpose traditional strategies for peak period transportation.

#### V. What are the Barriers to Innovation?

Considering the fiscal problems which are besetting more and more transit agencies, even while demands for peak services continue or increase, it is pertinent to ask why so few agencies have chosen to adopt the commuter transportation innovations which are the focus of this

study. What are the primary barriers to more widespread utilization of these strategies?

Perhaps the most important barrier is that many transit agencies simply lack the incentive or motivation to adopt non-traditional responses to peak period problems. Although private sector strategies are one way of dealing with the fiscal problems they confront, transit agencies can also cope through more traditional responses. Service cutbacks (usually concentrated in off-peak periods), fare increases, and the use of part-time drivers are all means of addressing fiscal problems which are compatible with the traditional transit agency orientation. An agency with traditional management will usually look first to such strategies, and if they promise to solve the immediate problem it will look no more until the next crisis occurs.

While this response leaves largely intact the structural conditions which underlie the peak period problem, and does nothing to move towards a situation in which the agency is better able to match supply and demand characteristics, it has some major advantages from the standpoint of a traditionally oriented management. Why go through the organizational and political trauma, however mild (and it may not be mild), of altering the institutional structure for service delivery in order to solve a problem for which a response thoroughly compatible with existing institutional mechanisms is available? Moreover, it is by no means proven that an innovative strategy will result in major subsidy savings compared to traditional responses, at least in the short run, and the short run is usually the relevant decision frame. Furthermore, all the innovations

discussed here weaken in some way the transit agency's ties to the middle class commuter market, who typically represent its most important political constituency. Unless there is simply no other feasible option, as in the case of the Houston MTA, or the costs of conventional strategies are so high as to be unacceptable, as in the case of the Golden Gate Transit, a traditionally oriented transit agency can usually find a conventional response which will deal with the immediate problem.

Even when a transit agency is motivated to utilize an innovative commuter transportation strategy, there often remain significant barriers to its implementation. Labor issues are one major constraint. Some labor contracts prohibit or severely restrict subcontracting of services, and unless the transit union can be compelled to eliminate these provisions an important option is unavailable. For example, the SCRTD is totally prohibited from service contracting at present. Transit unions may also attempt to use the leverage given them by Section 13(c) to forestall innovative options if they require the use of federal funds. Golden Gate Transit's union delayed the implementation of that agency's vanpool program for a year by not signing a 13(c) agreement needed to purchase the vans, and only relented when the agency agreed not to reduce the size of the bargaining unit as the result of the vanpool program. Similarly, Tidewater had to agree to have all van maintenance done by transit workers. When agencies actually do contract out services, unions may subsequently claim that the result has been to worsen employee working conditions, and seek relief by invoking 13(c) protections. Thus Tidewater Transit has been sued by its union as the result of contracting

out a number of services, with the union alleging that drivers have been adversely affected.

One of the cornerstones of the innovative approach to commuter transportation problem solving is the matching of supply (e.g. types and costs of services) to demand characteristics. This assumes, however, that the appropriate types of supply of services can be created. Of greatest concern is whether the commuter market can support profitable unsubsidized private bus service. If it cannot, then the service turnover strategy is infeasible, as are other attempts to increase the supply of private commuter bus service. Private operators in Houston, San Francisco, and Hartford all believe that subsidies are essential for additional commuter services. Hartford area bus operators are apparently uninterested in taking over routes the transit operator may decide to abandon, and Boston area operators, while interested in MBTA routes, are somewhat skeptical about their profitability based on the one experience to date. On the other hand, a number of SCRTD express routes apparently could be turned over to the private commuter bus companies in Los Angeles on a profit making basis. A planning study indicated that 13 of 17 SCRTD peak period only routes could be profitably operated by private companies at current or slightly higher fares.

Another supply constraint is that private bus companies may lack the equipment to handle a major expansion of their commuter services, such as would have been required in Los Angeles if a proposal to turn over nearly 100 bus runs per day to the private sector had been adopted. The needed equipment could be purchased by the transit agency, but the use of

Section 3 funds would probably create serious 13(c) problems. Both Houston MTA and Golden Gate Transit require their bus contractors to provide all of the equipment used in the service. If the company does not already own the vehicles this can represent a very large initial capital outlay. New buses cost well over \$100,000, and while used coaches are much less expensive, they are increasingly difficult to locate. One consequence is that several companies must be involved in the Houston and Golden Gate programs, as none own enough equipment to provide all the service, or can afford to acquire an additional bus just for two commuter runs a day. While this spreads the business around, it also means that the contracting process becomes a complicated administrative problem for the transit agency, as it must deal with multiple contractors, devise equitable bidding procedures, and the like.

Transit agency leasing of the needed equipment, which is done by Tidewater Transit and Pentran, can minimize the capital outlay. However, if the equipment is expensive the bus operator is still faced with high lease costs which push the necessary fares or contract price upward. It is significant that the private sector supply has been forthcoming in all five areas where contracting or service turnovers have occurred, but the potential problem remains.

### III. Policy Implications: Can Commuter Transportation Innovation by Transit Agencies be Encouraged?

Transit agencies have utilized innovative private sector strategies for peak period transportation service provision when three conditions

have been present. First, the agency has been under pressure to do something to reduce subsidies or to improve service. Second, the agency's top management has been persuaded, whether by internal studies and staff advocacy or simply its own orientation to problem solving, that traditional responses are inferior to an innovative approach. Third, the agency's policy makers are local government officials with a high degree of fiscal responsibility for decisions by the transit agency. That is, they can directly affect local government subsidies to the transit agency and thus have an interest in the most cost-effective approach to service delivery possible, commensurate with the maintenance of good service.

If these are the key factors promoting commuter transportation innovation, the obvious question is whether public policies are available which could encourage greater utilization of these innovative strategies. The reason for encouraging such strategies is that they provide a way out of the current fiscal-service dilemma. Their great merit compared to traditional responses to fiscal problems and/or service pressures is that they reduce the level of public transportation costs while allowing service levels to be maintained or increased. Traditional strategies such as fare increases or service reductions either require users to pay more or decrease service availability, yet do not attack the underlying problem of escalating production costs. The use of part-time drivers can reduce production costs, but as such drivers are typically compensated at approximately the same wage rate as regular drivers, the savings accrue from improved labor utilization. Private bus companies pay their drivers \$2 to \$5 per hour less than transit agencies, and thus

have significantly lower labor costs overall. It is apparent, therefore, that private sector innovations are powerful tools for improving the cost-effectiveness of transit agencies.

It is equally clear, however, that major cost savings from innovative strategies may also require very large institutional changes. The commuter bus study conducted in Southern California found that the SCRTD could save about \$4.6 million annually by contracting or turning over all of its peak period-only express bus services to the private sector. But this represents only 10 percent of the unfunded deficit the agency recently faced (before bailed out by a sales tax), and which it opted to address with a policy of fare increases and service reductions. To achieve savings comparable to those associated with the SCRTD service reductions (about \$20 million), the agency would have had to contract out a significant amount of all of its peak service (not just express service) in excess of base requirements. This would be a radical move, and is probably infeasible within the present labor constraints confronting the agency. It bears emphasizing, then, that private sector innovations alone are probably not sufficient to resolve major fiscal problems. Of course, both traditional and non-traditional strategies can be used simultaneously, such as contracting out express routes and raising peak period fares.

While private sector innovations represent some very significant actions which transit agencies could undertake to reduce deficits and/or improve service, few federal or state policy instruments are available to increase their utilization. Consider the three factors which are

associated with innovation: fiscal and/or service pressures are largely situation specific; innovative management is in critically short supply within the transit industry and not something that can be simply manufactured; and, funding and decision making arrangements reflect local and, to a lesser extent, state political actions which have already been taken and are difficult to alter. It must be emphasized, moreover, that the latter two factors are especially critical, yet are the most difficult to influence.

The two policies most likely to encourage transit agency interest in private sector innovations are cutbacks in federal operating subsidies and a loosening of Section 13(c) constraints. If federal operating assistance is in fact eliminated, many transit agencies will face fiscal pressures, and local subsidies (including state funds) will become much more important. As local governments bear a much larger burden of the transit deficit, local officials are likely to become motivated to advocate cost-effective innovations unless dedicated funding sources exist. When transit agencies receive funds with no strings attached they are prone to continue in the traditional service delivery framework, and local governments typically lack the desire or the ability to influence the service-subsidy connection. It is not the reduction in federal subsidy per se which is crucial, but rather the potential effects of this action on local subsidy and service arrangements which may lead to a greater propensity for transit agencies to innovate. Thus, although one of the transit industry's major objectives is to obtain dedicated, formula-based funding sources, it is obvious that this will merely tend



to perpetuate its traditional orientation by insulating transit agencies from the cost-effectiveness concerns which invariable seem to accompany discretionary funding and control of both subsidy and service decisions by fiscally responsible local officials. As for the labor issue, any administrative or legislative changes in Section 13(c) which clearly indicate that it does not give transit workers veto power over service changes which do not lead to the direct elimination or worsening of conditions of current workers jobs would probably embolden some transit managers to experiment with new initiatives.

Even if all of the incentive barriers to private sector innovations were removed, some obstacles to actually implementing the innovations, most notably the labor constraints, would remain. The experiences examined in this study suggest, however, that even the labor barrier is not impossible to overcome if there is a will to use the strategies. Tidewater Transit, ConnDOT, and Houston MTA have each contracted with the private sector, Golden Gate has created a successful vanpool program which has offset additional demand for its own express service (and thereby the need for additional transit workers), and Pentran has turned transit services over to private bus companies, all without making any significant concessions to labor. It is the will to utilize such strategies which is most commonly the missing ingredient. Unless that will develops locally, it is unlikely that state and federal policies can create it.

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