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"Issues Raised By Competitive Contracting of
Bus Transit Service in the U.S.A."

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I. INTRODUCTION

Public agencies in the United States have been contracting with private transportation providers to operate public transportation service since the early 1970's. Today, transit service contracting is a well-established practice among local governments, and in many communities represents the only way in which public transportation has ever been provided. A national survey conducted in 1985 found that over 300 public agencies--cities, counties, and transit districts--throughout the U.S. contract for over 400 separate public transportation services (Teal, 1988). In California alone, over 200 separate transit services are currently contracted to private transportation operators, including all of the transit services provided by the Counties of Los Angeles and San Diego. Transit authorities in Texas, Illinois, Washington, and Virginia, as well as California, have contracted with private operators for relatively large transit operations. In addition, the Denver transit authority, which operates over 750 buses, is currently engaged in competitively contracting out 20 percent of its bus service, a process which will be completed by mid-1989.

In 1984, the Urban Mass Transportation Administration, recognizing that competitive contracting represented a powerful mechanism for maximizing the cost-effectiveness of transit service, promulgated private sector policies which strongly encouraged local transit agencies to utilize this service delivery mechanism. UMTA's strong and consistent policy support for competitive contracting since 1984 has been premised upon the conviction, bolstered by several studies, that competitively procured transit service will be significantly less expensive than service supplied by a public agency monopoly, and that contracted service will be comparable in quality to services operated directly by public agencies.

Although considerable evidence has accumulated since 1984 that public agencies can realize substantial cost and subsidy savings by contracting with private operators for transit service, there remain those who are unconvinced that these experiences can be replicated on a wide scale. Some skeptics, even those who acknowledge that savings have been achieved in actual cases of contracting, question whether these savings will endure over the long term. Others suggest that the previous studies have overlooked the transition costs of converting existing public agency operated service to contract operation, and that these transition costs will largely eliminate any potential savings during at least the first few years of contracting. The cost to public agencies of administering and monitoring large programs of contracted service has also been cited as a hidden, albeit substantial, cost of contracting. In addition, public agency transit managers have questioned the safety and service quality record of privately contracted transit operations, while labor unions raise the spectre of marginally qualified, poorly trained non-union private drivers taking jobs away from their members and undercutting existing transit industry wage scales.

Clearly, these cost, quality, safety, and labor issues are deserving of careful analysis as UMTA continues to emphasize private sector involvement in transit service provision. This paper uses the most current, comprehensive data available to analyze these issues, primarily with respect to bus transit contracting. As this paper indicates, the available information demonstrates convincingly that substantial cost and subsidy savings, both short term and long term, do result from competitive service contracting. In addition, public agency monitoring/administration costs tend to be a small percentage of the cost of privately contracted service, and transition costs, while real, do not eliminate the savings from service contracting. The service quality and safety records of privately contracted service do appear to be potential problem areas, but the limited data currently available to assess these issues do not support strong conclusions about the performance of private contractors. With respect to labor impacts, no public transit agency workers have lost their jobs or suffered a reduction in their base salaries as a result of private sector contracting, and the workers of some private contractors are unionized. Moreover, while drivers of private contractors are

typically paid significantly lower wages than those of public agency drivers, this explains only part of the cost differential between public agencies and private contractors. Factors other than driver wage differences are important in creating cost savings.

II. COST SAVINGS FROM COMPETITIVE CONTRACTING

Cost Comparisons for Identical Services

Several studies have been conducted of the comparative cost of public agency and private contractor operation of transit service, all of which have concluded that competitively contracted services are less expensive. These studies have usually suffered from a similar methodological problem, however, namely that either public or private costs have been estimated from cost models in making the comparison. While this does not invalidate the conclusion of lower private contractor costs, particularly given the magnitude of the cost differences determined by the studies, it does raise the issue of the accuracy of these comparisons. Fortunately, there do exist several situations in which a public agency first procured (non-competitively) transit service from a regional transit operator, and then subsequently bid out the service and contracted with a private operator. In such cases, the service to be operated is identical or highly similar for both public and private operators, and the comparative prices charged to the public agency sponsor of the service are known with precision. Assuming that these prices accurately reflect the underlying cost of the service, this situation allows for an extremely reliable comparison of public and private operator costs.

Several such substitutions of private operators for public transit authorities have occurred during the past several years. Those for which documented cost comparisons are available are located in Los Angeles, Chicago, the San Francisco Bay Area, Snohomish County (Washington), Johnson County (Kansas), Yolo County

(California), Fairfax County (Virginia), and Fort Wayne (Indiana). In all but one case (Chicago) the services in question are fixed route bus operations, and in every case but Fort Wayne the entire transit service was contracted out. In Fort Wayne, contracting affected only the bus drivers--management hired contract drivers from local transportation companies and temporary help employment agencies to operate (by 1988) over one-third of the agency's bus service.

Table 1 shows the results of the cost comparisons for these operator substitution situations. Actual cost savings for the public agency sponsor ranged from 22% to 39% for the fixed route bus service, and were over 50% for the Chicago Transit Authority's demand responsive service for the disabled. In most cases these cost savings slightly understate the true magnitude of the cost differences, as public operator costs would have had to be even higher (to reflect one year's worth of inflation) in the year the service was first being operated by the contractor.

TABLE 1
COST COMPARISON FOR PRIVATE CONTRACTOR SUBSTITUTION SITUATIONS

<u>Public Agency Sponsor</u>	<u>Cost Savings</u>	<u>Type of Service</u>
City of Los Angeles	32%	19 fixed route buses
BART District	26%	45 fixed route buses
Snohomish County, WA	22%	58 fixed route buses
Johnson County, KN	39%	21 fixed route buses
Yolo County, CA	37%	14 fixed route buses
Fairfax County, VA	39%	33 fixed route buses
Fort Wayne, IN (drivers only)	22%	86 bus system
Chicago Transit Authority	50%	Demand responsive service for disabled

Source: Data supplied by public agency sponsors and contained in Private Sector Briefs (Rice Center, Houston, Texas, 1988)

The mean savings are 31% for the seven fixed route bus services. It bears emphasizing that these are actual monetary savings--the Bay Area Rapid Transit District (BART) will reduce its actual outlays for its express bus service by over \$2.2 million in the first year of contracting with a private operator compared with the price it was paying to the transit agency from which it previously obtained the service.

Cost Savings Estimated from Cost Models and Bid Prices

While the results shown in Table 1 are documented cost savings, several other studies have been made of the estimated cost savings in actual situations of service contracting. Although these studies rely on cost models to determine public transit agency service costs, the cases are sufficiently important that they merit examination as well. Table 2 shows the results of these comparisons for service contracting situations in Houston, Dallas, Orange County (California), Los Angeles, New Orleans, Cincinnati, and Miami. In each area, the transit agency contracts for fixed route bus service; the last four cities are the site of UMTA demonstration projects of competitively contracted bus service, and the cost comparisons are for those projects. In Cincinnati and Orange County, the public transit agency costs represent the bid prices for specific services which were competitively procured (in Cincinnati, both marginal cost and fully allocated cost bids were developed); in all other cases, public transit agency costs were calculated from cost models developed by the agency, consultants, or the author. In some cases, both "fully allocated" cost and the "avoidable" cost of the service were estimated for the public transit operator, and both are shown. The avoidable cost estimate assumes that certain administrative and overhead costs of the public agency cannot be eliminated when service is contracted out, hence the public operator's cost reduction is less than proportional to the amount of service contracted. Even for the fully allocated cost estimates, certain system-related administrative costs such as planning, marketing, and customer information are not included in the public agency's costs attributable to the service.

Although the methodologies used to conduct the cost comparisons shown in Table 2 are both less reliable and less consistent than cost comparisons based on the direct substitution of a competitively procured private operator for a non-competitively procured public transit authority, the results are strikingly similar. Cost savings range from no savings up to 54% savings, with mean lower bound savings of 19% and mean upper bound savings of 33%, or 26% at the midpoint of this range. Given the consistency of these results with those shown in Table 1, it seems reasonable to conclude that cost savings averaging about 25-30% have been achieved from the major experiences with bus service contracting to date.

TABLE 2
COST COMPARISONS FOR COMPETITIVELY CONTRACTED BUS SERVICES

<u>Transit Agency</u>	<u>Calculated Savings</u>	<u>Basis of Comparison</u>
Cincinnati	0-35%	Bid prices
Orange County	29%	Bid prices
Houston	24%	Fully allocated
Dallas (two services)	11-33%	Avoidable/Fully allocated
New Orleans	8-28%	Short/long term avoidable
Miami	15-30%	Short/long term avoidable
Los Angeles (City)	40%	Fully allocated
Los Angeles County	47%	Fully allocated

Sources: Data supplied by public agencies, UMTA Section 15 reports, consultant reports (Los Angeles), and Private Sector Briefs

Long Term Cost Savings

Skeptics of the cost performance of privately contracted transit service contend that the level of savings indicated by Tables 1 and 2 will not hold up over time. They suggest that private operators will "buy in" to a contracted service with low bids, but that prices will escalate sharply over time as labor costs rise and the operator increases its profit margin. Proponents of competitive procurement contend that the element of competition will prevent any operator from exhibiting such monopolistic behavior. Fortunately, this issue can be addressed empirically, as several public agencies have been contracting for service for many years. If long term cost trends really are unfavorable to contracting, this should be readily discernable. The data in Table 3 are for a sample of relatively large contracted services (more than 20 vehicles in all but one case, and in several cases many more) which have at least 5 years of cost experience, and for which contracts have expired during this time period and been re-awarded (sometimes to the incumbent). This sample includes the large majority of such services in the USA.

As the results of Table 3 indicate, most privately contracted services have exhibited quite remarkable cost behavior over time, with contract prices generally declining in real (inflation adjusted) terms. Of the 13 services or groups of services included in the table (the Pace all day service for the same routes is a subset of the entire group of Pace all day service, and hence is not counted separately), 9 exhibited a reduction in real unit costs for the contract service over the period of the comparison. Moreover, of the contracted systems in Table 3 whose unit costs have increased more rapidly than inflation, only the Phoenix Transit fixed route service is competitively procured. The Omnitrans Dial-A-Ride service is a negotiated contract, as is the Suffolk County bus system, while the Westchester County bus system is a franchise arrangement, i.e., essentially a private monopoly.

TABLE 3

LONG TERM COST EXPERIENCE FOR PRIVATELY CONTRACTED SERVICES

<u>Public Agency Sponsor/Service</u>	<u>Change in Real Unit Cost</u>	<u>Period</u>
Houston Metro--Commuter Bus	-31.9%	1982-88
San Diego County--Fixed Route	-27.4%	1981-88
Phoenix Transit--Fixed Route	+20.1%	1983-88
Pace--All Day Fixed Route (all routes)	-4.0%	1984-88
Pace--Feeder to Commuter Rail (all routes)	-12.0%	1983-88
Pace--Fixed Route (same routes)	-12.6%	1984-88
Golden Gate Transit--Commuter Bus	-23.6%	1982-88
Suffolk County--Fixed Route	+68.8%	1981-87
Westchester County--Fixed Route	+14.1%	1979-87
Orange County Transit--Dial-A-Ride	-5.2%	1982-89
Houston Metro--Handicapped Dial-A-Ride	-18.1%	1979-88
Phoenix Transit--Sunday Dial-A-Ride	-16.0%	1978-88
El Cajon (CA)--Dial-A-Ride	-21.9%	1973-88
Omnitrans--Dial-A-Ride	+10.1%	1982-87

Sources: Data supplied by public agencies.

The cost containment record of these competitively contracted services is in marked contrast to that of public operated transit systems, whose unit costs increased 30 percent above the inflation rate between 1975 and 1984. Transit industry cost increases have abated somewhat during the past three years, but nonetheless costs for bus service increased at an annual average rate of 4.0 percent in real terms between 1980 and 1986. For the competitively contracted systems included in

Table 3, the mean annual change in contract price was a reduction of 1.7 percent in real terms. The unit cost of competitively contracted transit service thus declined 5.7 percent a year compared to the unit cost of public agency operated bus service. Over a five year period, this produces a cost differential of 32 percent. In other words, with current transit industry cost trends, competitive contracting results in substantially greater long term cost savings than short term cost savings--which themselves are quite significant, as Tables 1 and 2 indicate. This is exactly the opposite of the expectations of the skeptics.

Administrative/Monitoring Costs for Contracted Services

Relatively few public agencies have attempted to make precise estimates of their costs of administering and monitoring contracted transit service. The estimates which do exist, moreover, are of varying quality. The most detailed analysis was conducted by Suffolk County (NY), which determined that it expended \$138,000 overseeing a \$10.7 million contracted fixed route bus system; administrative costs thus represented 1.3 percent of the amount of contracted service. Most other agency estimates of administrative costs tend to be higher--San Diego County estimates that its personnel related administrative costs are 9.9 percent of the total cost of contracted services, and Orange County Transit District estimates an additional 3.9 percent for personnel related administrative/monitoring costs. There is a clear problem with comparing these estimates, as different items are included. Some agencies include marketing costs, which strictly speaking are not an administrative/monitoring cost. The most reliable indicator of the amount of administrative effort expended on contracted services probably is the ratio of professional administrative staff to amount of contracted service, as these data are reasonably available and consistent. Table 4 shows these data for seven agencies which competitively contract for substantial, but widely ranging, amounts of service.

TABLE 4
ADMINISTRATIVE EFFORT EXPENDED ON CONTRACTED SERVICES

<u>Agency</u>	<u>Annual Contract Amount</u>	<u>Professional Staff</u>
Snohomish County	\$5.3 million	2.0
San Diego County	\$3.1 million	4.5
Pace	\$5.6 million	1.5
Omnitrans	\$2.7 million	1.0
Houston Metro	\$7.8 million	2.0
Orange County TD	\$4.6 million	3.0
Riverside TA	\$1.0 million	0.6

Source: Data supplied by public agencies.

Even though direct costs of professional staff do not represent all of the administrative/monitoring expense of contract operations--secretarial/clerical support, office overhead, on-street monitoring, legal assistance, and other staff support are additional expenses--these costs probably comprise at least 50 percent of the total administrative/monitoring cost, exclusive of such system-related expenses as planning and marketing. Assuming that a professional staff person costs approximately \$50,000 annually, and that professional staff expenditures represent 50 percent of total administrative/monitoring costs, the administrative/monitoring costs for the seven agencies listed in Table 4 are an estimated 2.6 to 14.5 percent of the costs of contracted service. The average administrative/monitoring burden, calculated in this simplistic way, is 5.6 percent. Although this is four times the level determined by Suffolk County's detailed calculation, it is probably a realistic figure, at least as an upper bound. None of these contracted operations are as large as Suffolk County's

system and there are economies of scale in administrative costs for contracted services; the essentially non-competitive nature of Suffolk County's system probably also minimizes administrative/monitoring burden. For relatively large contracted services, it seems likely that the additional costs for contract administration and service monitoring will be in the 3 to 10 percent range, with most systems not exceeding 5-6 percent administrative/monitoring costs.

Transition Costs of Converting Public Agency Operated Services to Privately Contracted Services

When an existing service directly operated by a public transit agency is converted into a contracted operation, there may be a substantial lag time before the public agency can eliminate all of the costs associated with providing this service. Some costs may never be eliminated, particularly if a small amount of service is contracted. In addition, if existing public agency employees are laid off as a result of service contracting, federal legislation requires that compensation be awarded. To date, no agency which has contracted out services previously operated by its own employees has laid off workers as a result, and thus there is no experience with the impacts on cost savings of awarding compensation to displaced workers. It is possible, however, to estimate the transition costs associated with the lag time required to eliminate public agency costs when existing services are contracted out.

In a recent study conducted by the author of contracting out existing public agency bus service in the Chicago region, it was determined that cost savings were modest or nonexistent in the first two years of contracting (Teal and Giuliano, 1989). Using an avoidable cost model for the public agencies (the Chicago Transit Authority and Pace, the suburban bus agency) and assuming that public agency labor costs could only be reduced through attrition--i.e., no layoffs--after service was contracted out, estimates were made of cost savings for the first three years of service contracting, as well as after all avoidable public agency expenses had been eliminated

(the "Final" estimate). The table below gives the results of these short and long term estimates of cost savings.

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Final</u>
Pace Southwest Service	0%	1%	20%	20%
CTA--Evanston Service	10%	23%	29%	35%
CTA--North Park Garage Service	10%	7%	13%	32%

As is apparent from these results, it can take two to three years before cost savings become significant (the differences in the above table reflect both the nature of the services contracted out and different assumptions about how rapidly the contracted service is phased in). In all cases, substantial cost savings were predicted to eventually occur, but short term (2 to 3 year) savings were limited--and in one case nonexistent. In other cases analyzed by the author and his colleagues, losses for the first 2 to 3 years have been predicted from service contracting, even when significant savings were predicted over the longer term (Teal, et. al., 1987).

The transition costs presented above assumed a gradual phase-in of contracted service, within the attrition rate of the agency. In at least one USA case, however, a large amount of existing public agency service is being contracted out over a very short time period. The Denver Regional Transit District is under a state legislative mandate to contract out 20 percent of its existing service by mid-1989, without laying off any existing workers. In order to accomplish both of these objectives, the transit agency will be forced to carry a surplus of workers until attrition reduces the size of the labor force to that which is needed to operate 80 percent of existing service. In all likelihood, it will require at least two years after contract service is initiated for the agency to adjust the size of its work force--in the meantime, it will be incurring additional costs for under-utilized labor, a potentially substantial transition cost. Consequently, it is not inconceivable that the agency will achieve no actual budgetary

savings in the first year or two of contracting, even though the winning bid for the first service package was nearly 50 percent below the agency's own service costs.

III. SERVICE ORGANIZATION ISSUES

The cost and quality of contracted bus services can be significantly affected both by the way in which the service is organized and by the terms of the contract. The key factors are the size of the service package, the length of the contract, and whether the contractor or public agency sponsor is responsible for providing vehicles for the service. In general, service organization factors which reduce private operator risk and which increase potential financial return lead to higher levels of competition for the contract, which should result in downward pressures on bid prices. Contracts with a duration of at least three years, relatively large contracts, and sponsor provision of vehicles should theoretically attract the most bidders, and by inference, the greatest price competition. In addition, whether the service to be contracted relates in some way to existing contracted services in the region may be an important factor in competition. If one company already has an operations base in the service area as the result of another contract, it will probably have a decided economic advantage over other potential providers, particularly those from outside the region.

The effects of these service organization factors can be observed in several major recent competitions for contracts. In Dallas, Houston and Snohomish County, there have been only two or three bidders for very large contracts for commuter bus service, apparently as a result of the requirement that the operator had to provide the vehicles--between 40 and 100 new or very recent over-the-road buses. Thus the capital requirements were quite large, and only a handful of large national firms felt comfortable bidding on the service. In addition, competition for subsequent service packages in Dallas and Snohomish County was non-existent--other companies apparently believed that the incumbent contractor had an insurmountable competitive advantage by virtue of its existing facilities for service operation. In San Francisco, on

the other hand, several bids were received for BART's express bus service, even though contractors had to supply 45 new or recent model buses. All the private bidders were large national companies, however, indicating that the financial burden and risk were unacceptable to smaller local companies.

Pace, the suburban Chicago transit agency, has extensive experience with service contracting, with 21 separate services now under contract. Pace's feeder bus services to commuter rail stations tend to be small services--the average contract amount is \$110,000 and the service operates only during peak periods--and have attracted relatively little competition. During 1987-88, only 2.5 bids per contract awarded were received by Pace. Pace's contracts for all day service, however, tend to be significantly larger--the average contract is worth about \$350,000 per year, and some are worth nearly \$500,000. Given the higher financial rewards, it is not surprising that Pace received about 4.5 bids per contract for these services. Moreover, in several cases national firms have bid on (and been awarded) these contracts, whereas national firms have only rarely bid on feeder bus contracts. Whether the limited competition for feeder bus contracts has affected bid prices is not clear, as it is not possible to directly compare the costs of the two types of services due to their different nature.

IV. QUALITY OF SERVICE ISSUES

Critics of transit service contracting almost invariably contend that privately contracted service will be of poorer quality than that operated directly by a public agency. Just what is meant by "service quality" is often vaguely defined, but several quantitative indicators are available which can assess at least certain dimensions of quality. Because service reliability and on-time performance are clearly important aspects of quality to transit riders, the number of missed trips and the number of late trips (expressed as rates) are key quality indicators. The number of roadcalls

(expressed as a rate) is another important indicator, as a bus which breaks down while in service is likely to inconvenience riders (even if no passengers are on board, another bus must be brought into service, and the result will probably be a late or a missed trip). Finally, passenger complaints are an important subjective indicator of the operator's service quality.

There exist very few quality of service comparisons between contracted bus service and public agency operated bus service. While several public agencies have collected quality of service data for privately contracted service, the problem is one of comparability--these agencies did not obtain data for an identical or similar public agency operated service. The ideal quality of service comparison would be for a service operated both by a private contractor and by the public agency. While a handful of such comparisons do exist, most are for recently implemented services and, with a single exception, include at most one year of data.

The record of private contractors is mixed for the few quality of service comparisons that do exist. In Los Angeles, private contractors have compiled a better quality of service record than the regional transit agency for a relatively large contracted service (70 vehicles operating 1.3 million vehicle miles annually of commuter and local service). Customer complaints, cancelled trips, late trips, and roadcall rates have all been reduced by the two private contractors which operate this service. Similarly, in Snohomish County, Washington, the County has not found it necessary to impose a single penalty for inadequate service--as specified in the contract--in over two years of operation by its private contractor. And in Brevard County, Florida, Space Coast Transit significantly reduced its roadcall rate after it contracted out its maintenance operations to a private firm.

On the other hand, evidence also exists to indicate that service quality in some contracted systems is problematic. Suffolk County, NY found it necessary to terminate one of its contractors due to poor quality service, although it has had no serious problems with its other four contractors. In both New Orleans and Miami, where

UMTA sponsored demonstrations of service contracting for existing service were recently implemented, early evaluation reports indicate that the private contractors have experienced an increase in complaints, roadcalls, and missed/late trips compared to the public agency operated service. In New Orleans, for example, missed trips by the contractor were 42 percent greater than the transit agency record over a two month period. In both cities, however, the only currently available data is for the first few months of contracting, when the typical start-up syndrome is likely to degrade the performance record of the contractor.

Because the available data is so limited, it is not possible at this time to make any reliable judgments about whether private contractors will be able to match the service quality record of public bus operators. By the conclusion of the UMTA demonstration projects, however, some reasonably definitive data should be available to assess this issue.

V. SAFETY ISSUES

Safety is another potential problem with transit service contracting commonly cited by its critics. According to the critics, the lower wages typically paid by private contractors will result in a poorer quality of driver, who in turn will be more prone to have accidents. As with the service quality issue, relatively little empirical evidence is currently available to illuminate this issue. The evidence which is available suggests that private contractors may have difficulty matching the accident record of public agency operations, but the data is too mixed to support strong conclusions.

Probably the most reliable comparison of the accident record of public agency drivers and contract drivers has been compiled by the Fort Wayne Public Transportation Corporation, which began using contract bus drivers in late 1986. Fort Wayne PTC has collected information on all accidents involving both employee drivers and contract drivers since 1987. For 1987 and 1988, employee drivers accumulated

6.06 accidents per 100,000 bus miles, whereas the contract drivers registered 6.00 accidents per 100,000 miles, a virtually identical rate. However, a detailed analysis of 1988 accident data reveals that contract drivers had a 14 percent higher rate of on-street collision and passenger accidents than did the employee drivers, and their total accident cost (which include direct cost of damage to the vehicles plus sums paid to claimants minus recovery from claimants) rate was \$5690 per 100,000 miles, compared to \$4812 per 100,000 miles for the employee drivers. The Fort Wayne data indicate that there is a worst a minor difference in safety record between the agency's employee drivers and contract drivers. Because the contract drivers receive essentially the same training as do the employee drivers, however, the Fort Wayne results do not necessarily apply to the more typical contracting situation in which all service functions are contracted out, and the private contractor uses its own safety training program for its drivers.

A relatively comparable accident analysis has also been conducted for those contracted services of the City and County of Los Angeles which were previously provided by the regional transit authority. The transit authority service had a total accident rate of 2.43 accidents per 100,000 miles, whereas in the first year of contracting the City service has registered 1.87 accidents per 100,000 miles (23 percent less) and the County service has accumulated 3.69 accidents per 100,000 miles (52 percent more). This suggests little overall difference in accident record. Rather different results have been obtained in Houston, where the Metropolitan Transit Authority contracts for a major commuter bus operation, now approaching 100 privately contracted buses. During 1987-88, the contractor registered 2.51 accidents per 100,000 miles. According to data supplied by the agency, the accident rate for its directly operated park and ride commuter bus service is only 0.76 accidents per 100,000 miles.

Because school bus service in the USA is both operated directly by school districts and contracted with private bus companies, accident records for school bus service offer another source of information on the relative safety record of public agencies and

private contractors. In California, public agency operated school bus services recorded an average of 0.690 accidents per 100,000 miles for the period 1978-79 through 1986-87. The accident rate for private school bus contractors for this same period was an average of 0.755 accidents per 100,000 miles, or 9 percent more. The difference is not statistically significant. On the other hand, for large school buses, the private contractors had an average accident rate of 0.912 accidents per 100,000 miles, which was 33 percent greater than the public operator rate of 0.685 accidents per 100,000 miles. What accounts for the contractors' poorer accident record for large buses is not known, but it is a consistent phenomenon over the period for which the data was collected. While the overall California data are not controlled for operating environment, a much more controlled comparison exists in the Los Angeles area, where the Los Angeles School District both contracts for school bus service and operates service itself. Over the past 10 years, the contracted service has had an accident rate 116 percent greater than that of the services operated by School District drivers. The school bus data, therefore, implies that at least for large buses, private contractors have a poorer accident record than public agency operated services. If this is really the case, it is almost surely because turnover is greater among drivers of private contractors (in important part because they tend to pay lower wages), and inexperienced drivers are more prone to be involved in accidents.

VI. LABOR IMPLICATIONS

In no cases of competitive contracting have existing transit workers lost their jobs. Even in cases where service was removed from a public agency, the agency's workers have been retained and placed in other jobs within the organization. Although the result may have been excessive costs for the public agency, this has been deemed necessary to avoid the legal and political problems associated with employee lay-offs.

It is widely believed that the primary source of private operator cost advantage over public agencies is lower wages, particularly for drivers. Private bus contractors do pay generally lower wages for drivers than public agencies, and their drivers are typically--but not always--not unionized. But the wage differential is not particularly large in some cases, and in there are other important reasons than lower driver wages why private firms can operate bus services less expensively than public agencies.

Relative to the driver wage issue, private operators have paid as little as \$5 per hour for bus drivers and as much as \$9.00 per hour. In Dallas, for example, the private contractor pays its drivers about \$9 per hour, whereas the local transit agency paid its drivers about \$11.50 per hour in 1987, or more than 25 percent greater. In Snohomish County, the contractor's unionized bus drivers also receive nearly \$8 per hour in wages. The unionized drivers for the private contractor which operates BART's express bus service are paid approximately the same. In Houston, on the other hand, private bus drivers have been paid as little as \$5 per hour to operate commuter service. In contrast, the public agency pays its drivers \$11.75 per hour. Moreover, Fort Wayne has been able to obtain contract drivers who are paid \$6.00-6.50 per hour, whereas its employee drivers are now paid about \$11.00 per hour. There are examples, therefore, of large differences in base wage rates for drivers.

Private contractors also tend to obtain greater productivity from their drivers than do public agencies. Drivers are typically guaranteed no more than 2 hours of pay per working assignment, are often paid only for time actually worked, and may even perform other duties when not driving. Fort Wayne, for example, paid its contract drivers for only 3.5 percent more hours than actually worked in 1987, whereas in 1985, the last year before contract drivers were used, it paid its unionized employee drivers for 23.4 percent more hours than were actually worked.

Private contractors tend not to pay mechanics any less than public agency mechanics, as market level wages for mechanics are similar to transit agency wage scales. This does not mean, however, that maintenance costs are the same for public

and private operators. Space Coast Transit reduced its maintenance costs by 20 percent by contracting out its maintenance function, even though the contractors's mechanics are even more highly paid than were the agency's own mechanics. Costs were reduced as a result of improved productivity and better organization of the maintenance function, not lower wages. Another analysis of comparative maintenance costs also came to the conclusion that private contractors were less expensive, often as a result of improved productivity. (Bajpai, 1988)

In addition to lower wages for drivers and improved labor productivity, private contractors are less expensive than public agencies because they have lower fringe benefit rates and less overhead expense. Private operators tend to have fringe benefit rates for their drivers of 20-25 percent, in contrast to fringe benefit rates of 40-50 percent in the public transit industry.

A particularly illuminating comparison which illustrates the sources of cost differences is found in the Dallas region, where a large private contractor--Trailways Commuter Transit (TCT)--operates over 100 buses in suburban service, while the City of Dallas Transit System (DTS) serves the central city (and also provides commuter service--as does TCT). In Dallas, about 17 percent of the difference in cost per revenue vehicle hour between the two operators (the total difference in cost is about 30 percent) is attributable to lower driver wages. The remainder is explained by other factors. DTS devotes nearly 28 percent of its entire operating budget to fringe benefits for its employees, whereas TCT spends only 12.5 percent of its budget on fringe benefits. Nearly 38 percent of DTS's expenditures can be classified as overhead, but only 27 percent of TCT's budget goes to overhead costs. In addition, TCT's maintenance expenditures per vehicle mile are substantially less than DTS, although some of this difference is undoubtedly due to the fact that TCT uses newer buses. Overall, 45 percent of the cost difference is attributable to lower fringe benefits, 27 percent to lower overhead costs (presumably resulting from a combination of lower salaries and greater productivity), 17 percent to lower driver wages, and 11 percent to lower maintenance costs.

VII. CONCLUSIONS

This review of bus transit contracting experiences in the USA indicates that service contracting is a sound economic strategy in both the short run and the long run. Moreover, it is not a strategy which appears to require that public agencies trade off cost savings against significant deterioration of service quality or safety, although the evidence is not yet definitive on these latter two issues. While service contracting clearly creates disbenefits for unionized public sector bus drivers, the cost savings from contracting are not simply built on the back of organized labor. It appears that more than half of the cost difference between private contractors and public agency operators is explained by factors other than the simple wage differential for bus drivers, most notably lower fringe benefits rates, greater productivity in use of labor, and less overhead expense. Private contractors have significantly lower costs even when driver wage rates are relatively close to public agency levels. As all of the other economic factors cited appear quite durable for private sector contractors, there is every reason to believe that their cost advantage over public agency operators will continue for the foreseeable future, and that bus transit contracting will continue to be a sensible strategy for improving the cost-effectiveness of the transit industry.

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