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URBAN PUBLIC TRANSPORT MOVES TO THE PURCHASER/PROVIDER SPLIT

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By Wendell Cox

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About the Author

Wendell Cox is principal of Wendell Cox Consultancy, an international public policy firm. He has provided consulting assistance to the United States Department of Transportation and was certified by the Urban Mass Transportation Administration as an "expert" for the duration of its Public-Private Transportation Network program (1986-1993). He has consulted for public transit authorities in the United States, Canada, Australia and New Zealand and for public policy organizations.

Mr. Cox served three years as the Director of Public Policy of the American Legislative Exchange Council, where he oversaw the development of state model legislation and policy reports. Mayor Tom Bradley appointed him to three terms on the Los Angeles County Transportation Commission, where he authored the tax amendment that provided the initial funding for building light rail and the subway. He was elected chairman of the American Public Transit Association Planning and Policy Committee (comprised of transit planning department officials) and the American Public Transit Association Governing Boards Committee (comprise of transit board members).

In 1999, Wendell Cox was appointed to the Amtrak Reform Council by the Speaker of the US House of Representatives, to fill the unexpired term of New Jersey Governor Christine Todd Whitman and was appointed to be chairman of the Financial Analysis Committee.

Wendell Cox was born in Los Angeles and grew up in Oregon, Washington and British Columbia. He attended the University of Southern California and earned a bachelor's degree in Government from California State University Los Angeles and a Master of Business Administration from Pepperdine University.
THE RISE OF THE PURCHASER/PROVIDER SPLIT

Over the past two decades, various countries have established policies to shift the production of transit services into a competitive environment. Known technically as the purchaser-provider split model, it preserves public funding for the service but creates incentives for efficiency and innovation by requiring both in-house and private operators to bid for the right to operate services. Public transport systems are tendered to multiple operators, who provide service according to public specifications. The resulting regional transit system is seamless, with full fare interconnectivity. Marketing is handled by the tendering agency, which ensures that all services are operated, from the perspective of customers, as part of a single, unified system. Without exception, the result has been cost savings, which vary country to country based upon labor market conditions.

EUROPE

The purchaser provider split model has been broadly implemented in Europe and recent directives of the European Commission are expected to result in conversion of most systems.

London

Transport for London (formerly London Transport) manages the largest bus system in the world, with more than 6,000 vehicles (service area population: 7 million). From 1970 to 1985, bus costs per vehicle kilometer had risen 79 percent. In response, the British parliament enacted legislation that lead to conversion of the entire bus system to competitive tendering. By 2000, the conversion had been completed, with the following results (Table #1):

- Costs per vehicle kilometer were reduced 51 percent from 1985 to 2000. This allowed LT to expand service 32 percent, while reducing operating and capital expenditures 35 percent. Improved productivity relative to inflation has produced cost savings of £5 billion.
- By 2000, ridership risen to the highest level since 1978, at 1.3 billion annual passenger journeys.
United Kingdom Outside London

Outside London, bus services have been deregulated. There is no overall public planning authority, though “quality partnerships” have been established between dominant local operators and local government units. Unit cost savings have declined 54.0 percent from 1986 (the last full year before deregulation) and 2000, slightly more than that of competitive tendering in London. From 1986 to 1999, overall expenditures were reduced more than 40 percent, considerably more than in London. However, ridership losses were substantial, at nearly 34 percent, compared to London’s 10 percent increase over the period (Table #3).
Table #3

<table>
<thead>
<tr>
<th>Indicator</th>
<th>London</th>
<th>Outside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Expenditures</td>
<td>-29.6%</td>
<td>-41.8%</td>
</tr>
<tr>
<td>Service Kilometers</td>
<td>30.8%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Unit Cost (Per KM)</td>
<td>-46.2%</td>
<td>-54.0%</td>
</tr>
<tr>
<td>Passengers</td>
<td>10.0%</td>
<td>-33.9%</td>
</tr>
</tbody>
</table>

Source: UK Department of Transport and the Environment

Copenhagen

In 1989, parliament began mandating conversion of public bus services in Copenhagen (1,150 buses, service area population 1.5 million). The government owned bus system was not allowed to compete, so that it could remain objective in administering the tendering. The tendering mandate was later expanded and the government bus company was privatized through sale. Conversion of all bus services was completed in 1995.

- Costs per vehicle kilometer were reduced 24 percent from 1989 to 1999. Overall capital and operating expenses declined eight percent from 1990, while service was expanded 14 percent. Management estimates savings at approximately $400 million through 1999.

- Ridership has risen nine percent to 260 million annual passenger journeys, after years of decline. Management attributes higher ridership to higher service levels from more cost efficient operations.

Stockholm

A parliamentary mandate led to the conversion of virtually all public transit service (bus and rail) in Sweden. Stockholm operates the nation’s largest system with 1,700 buses, 900 metro cars and 300 commuter rail cars (service area population: 1.8 million). All bus and rail services have been converted to competitive tendering.

- From 1991 to 1999, costs per vehicle kilometer were reduced 20 percent. Overall capital and operating expenses declined seven percent, while service was expanded 16 percent. If costs had continued to rise at the rate of inflation, an additional $1.5 billion would have been required over the period.
• Ridership has reached an all time record at 380 million passenger journeys.

UNITED STATES

Generally, the United States is perceived one of the most market-oriented economies. It may be surprising, therefore, that with respect to public transport, the United States is largely institutionally committed to a government monopoly model. The overwhelming majority of public transport services are provided by government monopolies.

Perhaps the most important reason that government monopolies have survived in the United States is that public transport policy has been largely nationalized. A leading trend in US law over the past 70 years has been pre-emption of state and local government authority by the federal government. When public transport companies were no longer able to obtain regulatory approval to raise fares to cover costs, the public transport policy was nationalized (federalized), and the public monopoly model was substituted for the former regulated private system.

Part of the federal program involved establishment of extraordinary labor provisions, including employee severance packages of up to six years. Another segment of the US economy, the railroad industry, had similar provisions, owing to its national defense important (after World War II). In the railroad industry, workers made redundant by improved productivity or mergers receive the extraordinary redundancy benefits. But the program works much differently in public transport. The federal public transport labor program is a significant barrier to improved productivity, because public transport agencies are disinclined to use the redundancy features, and the US Department of Labor has discouraged or barred its use in that manner. Not surprisingly, labor costs have risen well ahead of market rates and unit operating costs have risen substantially. At the same time, the federal program has provided large infusions of funding for capital projects, such as vehicle purchases and new rail systems. From 1970 to 1999, annual spending per passenger journey rose 141 percent (inflation adjusted) --- expenditures were up 155 percent, while ridership was up six percent.\(^{vi}\)

Thus, institutional barriers discouraged implementation of productivity improvements, such as competitive tendering. During the 1980s, the Reagan administration sought to implement competitive tendering programs, and the share of bus services operated competitively rose to approximately 10 percent. Since that time, the Clinton administration has discouraged competitive tendering, and there has been little or no increase in competitive tendering. However, 70 percent of paratransit (demand responsive services
largely for senior citizens and the disabled) services is competitively tendered.

**Las Vegas**

Las Vegas established a new public transit system in the early 1990s, to replace a smaller privately owned system. By this time, it was clear from experiences in other parts of the country that considerable cost savings could be obtained through competitive tendering. Since the system was new and was to be greatly expanded, there was little opposition from public transport trade unions. Currently 200 buses are operated and the entire system is competitively tendered. Service levels in 1999 were 7.25 times that of the last year of private monopoly operation.

- Costs per vehicle hour were reduced one-third from that of the former private monopoly. The Las Vegas system has the lowest cost of the 33 largest US bus systems, 44 percent below average (Figure #1).
- The low costs have allowed significant system expansion, which has led to annual ridership of nearly 55 million. This is a 400 percent increase over the former system and is one of the steepest ridership increases in public transport history.

Buses and operating facilities are leased to the private company by the public transport planning agency. There is a single contractor.

![Figure 1](image-url)
San Diego

Competitive tendering began as a response to the rapidly rising costs of the public monopoly operator, San Diego Transit. Various jurisdictions in the area had non-competitively contracted with San Diego Transit for service. After an expensive labor contract settlement in 1979, some jurisdictions began seeking competitive tenders for their services.

In the mid 1980s, the state legislature empowered the Metropolitan Transit Development Board (MTDB) to the public transport policy, largely due to a perception that MTDB had done an extraordinary job of building the first light rail line. MTDB has an uncommonly strong cost effectiveness ethic, and has relied upon that in administering the system. Part of MTDB’s motivation is a recognition that the lower the cost of bus service, the more funding can be committed to higher levels of bus service and expansion of the light rail

San Diego is unique because its competitive tendering conversion was not mandated or strongly encouraged by a higher level of government. vii

Conversion to competitive tendering has been within the rate of employee attrition, so that no layoffs have been required. By 2000, approximately 44 percent of bus services were competitively tendered.

- From 1979 to 2000, system wide bus costs per hour were reduced 31 percent. Annual bus operating expenditures have risen 17 percent, while service levels have been increased 71 percent. If costs had continued to rise at the rate of inflation, an additional $750 million would have been required over the period.

- Competition has had an impact on the government owned bus agency, which has reduced its costs per hour 17 percent. This agency’s improved cost performance has enabled it to win some tenders.

- Competitively tendered costs are approximately 42 percent lower than that of the government operator.

- Bus ridership is now 55 million, up 60 percent from 1979.

Generally, buses are leased to the private companies by MTDB. MTDB also provides an operating facility.
Denver

A 1988 Colorado state law required a partial conversion (20 percent) of Denver’s Regional Transportation District (RTD) bus service to competitive tendering, a mandate that was extended to 35 percent in 1998. RTD oversees a system of 900 buses and a light rail line, with 70 million annual unlinked trips (2000). The Denver competitive tendering program is the only such mandatory system in North America, and transit trade unions have been particularly interested in ensuring that the practice does not spread. As a result, there has been considerable controversy over the results of the program and contentious local political disagreements between proponents and opponents.

Through the years, studies have been commissioned by RTD, the state and labor unions.

- KPMG Peat Marwick was engaged under state law to conduct a performance audit of the program. The concluding second annual performance audit reported cost savings of 31 percent (public costs are 45 percent higher than competitive costs). Savings over the first five year period were projected at nearly $30 million, even after including more than $8 million in labor redundancy payments to public bus drivers to avoid layoffs. With respect to service quality, KPMG Peat Marwick noted: "No relationship was found between safety and quality of service and higher employee turnover.

- Elliot Sclar, in a study commissioned by transit labor, found competitive costs to be higher than non-competitive costs. Sclar calculated overhead costs at approximately double the normal rate, including costs normally associated with non-competitive service in overhead instead, did not adjust for competitive capital costs mandated by the public transport agency and not reported in non-competitive costs, and used a base year that did not precede the beginning of the competitive tendering program.

- Subhash Mundle, Janet Kraus and Wendell Cox were commissioned by RTD to produce a review of the competitive tendering program in 1996. They used the KPMG Peat Marwick cost allocation model and estimated average attributable fully allocated cost savings at approximately 35 percent. Through 1995 they estimated cost savings at $51 million and projected savings of $88 million through 1999 (1994$).
• Public Financial Management (PFM) was engaged by RTD to produce a report in 2001 summarizing results through 1999.\textsuperscript{xiv} PFM limited its review to the 1991 to 1999 period, and found incremental cost savings of $40.1 million. A major reason for the more conservative PFM results inclusion of costs relating to vehicle capital.\textsuperscript{xv} Other differences between the PFM report and the Mundle-Cox projection included the shorter period of analysis, use of current prices rather than inflation adjusted prices and a much more conservative excluded (overhead) function assumption. When the PFM results are adjusted to account for the difference in capital treatment, the 1999 cost savings become 34 percent.

Based upon the results of the KPMG Peat Marwick, Mundle-Kraus-Cox and PFM analyses, it is estimated that the savings over the first 10 years of the program were in the range of $70 million to $95 million (2000$).

Competitive tendering has been associated with a substantial improvement in RTD’s productivity.

• Before competitive tendering (1978\textsuperscript{xvi} to 1988), RTD’s operating expenditures rose 16.5 percent, while its service levels increased 2.5 percent, for a productivity loss of 12.0 percent.\textsuperscript{xvii}

• Since the last year before competitive tendering, RTD operating expenditures rose 12.9 percent, while service levels were increased 31.8 percent, for a productivity gain of 16.8 percent.

• If RTD costs per hour had remained at the pre-competitive tendering rate, 14.3 percent less service would have been offered for the same expenditure level in 1999.

The net effect has been that RTD has recovered virtually all of the productivity losses of the pre-competitive tendering period (Figure #2).

Denver is the only case covered that does not include a “purchaser/provider split.” When the 1989 legislation was drafted, the importance of such a model was less apparent. It was not generally appreciated that government agencies might unfairly administer competitive processes when they also played the role of competitors. Since that time, a number of attempts have been made to strengthen Denver’s legislation, but only one, the expansion of the competitive tendering mandate to 35 percent, has been enacted.

Moreover, generally, the Regional Transportation District has not been supportive of expanding competitive tendering, largely due to the political
influence of organized labour. RTD opposed the 1989 legislation and has opposed attempts to strengthen and extend the competitive tendering mandate. It is fair to suggest that RTD has been a “grudging” participant in the process, intending to limit the amount of competitive tendering. This is significantly different than the situation elsewhere, where competitive tendering is seen as a strategy that will be employed to a greater degree in the future. (indeed, outside the United States, the prevailing model involves full conversion of public transport systems to competitive tendering). In an environment where there is no intention to increase competitive tendering, and the political process is not sensitive to the potential for subjective administration of the competitive processes, there is less support for the purchaser/provider split.

<table>
<thead>
<tr>
<th>Table #4</th>
<th>Denver Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operating Cost (000,000 1999$)</td>
<td>$123.7</td>
</tr>
<tr>
<td>Total Service Hours (000)</td>
<td>1,606</td>
</tr>
<tr>
<td>Total Cost per Service Hour</td>
<td>$77.00</td>
</tr>
<tr>
<td>Competitively Tendered Service Hours</td>
<td>0</td>
</tr>
<tr>
<td>Share of Services Competitively Tendered</td>
<td>0.0%</td>
</tr>
<tr>
<td>Change in Cost per Service Hour</td>
<td>13.6%</td>
</tr>
<tr>
<td>Change in Expenditures</td>
<td>16.5%</td>
</tr>
<tr>
<td>Service</td>
<td>2.5%</td>
</tr>
<tr>
<td>Productivity (Incremental Service/ Incremental Expenditures)</td>
<td>-12.0%</td>
</tr>
</tbody>
</table>

Source: Calculated from FTA National Transit Database and RTD data.

Figure 2

Denver Competitive Tendering: Before & After

Service Hours
Expenditures
SUMMARY OF OTHER AREAS

Canada

Canada has been the slowest developed world nation to convert public transport services to the purchaser-provider split model. Suburban bus service is competitively tendered in Montreal, while smaller public transport systems are competitively tendered in British Columbia, Alberta, Saskatchewan and Ontario.

Australia

Conversions are underway or completed in Melbourne, Adelaide and Perth. Under a federal-state agreement, virtually all public transport services could be converted to the purchaser-provider split by early in the next decade under a federal-state agreement intended to improve public resource allocation and international competitiveness by subjecting public services to competition.

New Zealand

New Zealand public transport systems have been converted to a regulatory system similar to that of the UK outside London, most services are competitively tendered.

Japan

In the largest urban areas, Tokyo-Yokohama and Osaka-Kobe-Kyoto, most public transport service (bus and rail) is provided by private companies on a commercial (non-subsidized) basis. Ridership is exceedingly high in Japan. Ridership in Tokyo-Yokohama is more than double that of the US and nearly 10 times that of Canada. Ridership in Osaka-Kobe-Kyoto is equal to that of the US and five times that of Canada.

South Africa

Plans are underway to convert government and subsidized private monopoly public transport systems to competitive tendering. At the same time, unsubsidized privately owned “kombi-taxis” provide a large share of public transport rides. An exclusive lane for buses and taxis operates from the densely populated suburb of Soweto to the Johannesburg central business district.
**Developing World**

Throughout the developing world, more entrepreneurial models are typical. For example, for profit private bus operators predominate in Mexico City, Sao Paulo, Calcutta and Buenos Aires. In other cities, services are dominated by smaller vehicle operators, such as Manila and a number of African cities. Much of the former communist world continues to rely upon government monopolies. In many developing world cities, like those in the developing world, a number of urban rail systems are being built or expanded, which are largely owned and operated directly by government.

**CONCLUSION**

The urban area case studies above show that competitive tendering, usually employing the purchaser-provider split model (As competitive tendering conversion of public transport systems has spread around the world, the accompanying organizational model of the purchaser-provider split has become routine..) has generally improved the productivity of public transport systems by increasing the amount of service provided per unit of expenditure (Table #5). On average the productivity improvement has been 45 percent, ranging from a low of 17 percent in Denver to a high of 103 percent in London.

<table>
<thead>
<tr>
<th></th>
<th>Period</th>
<th>Converted to Competition</th>
<th>Expenditures</th>
<th>Service</th>
<th>Unit Costs</th>
<th>Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denver</td>
<td>1988-1999</td>
<td>22%</td>
<td>12.9%</td>
<td>31.8%</td>
<td>-14.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Copenhagen</td>
<td>1989-1999</td>
<td>100%</td>
<td>-13.5%</td>
<td>14.4%</td>
<td>-24.4%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Las Vegas</td>
<td>1992-1993</td>
<td>100%</td>
<td>128.5%</td>
<td>242.6%</td>
<td>-33.3%</td>
<td>49.9%</td>
</tr>
<tr>
<td>London</td>
<td>1985-1999</td>
<td>100%</td>
<td>-34.9%</td>
<td>32.2%</td>
<td>-50.8%</td>
<td>103.1%</td>
</tr>
<tr>
<td>San Diego</td>
<td>1979-2000</td>
<td>44%</td>
<td>2.7%</td>
<td>46.6%</td>
<td>-29.9%</td>
<td>42.7%</td>
</tr>
<tr>
<td>Stockholm</td>
<td>1991-1999</td>
<td>100%</td>
<td>-7.1%</td>
<td>16.1%</td>
<td>-20.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>77.5%</td>
<td>14.8%</td>
<td>64.0%</td>
<td>-28.8%</td>
<td>44.9%</td>
</tr>
</tbody>
</table>

Source: Above
Endnotes

i Unless otherwise noted, all financial data is inflation adjusted.
ii Outside London, public transit was deregulated, with similar savings, but substantial losses in ridership.
iii Service as measured in vehicle kilometers.
iv Latest information available.
v All data from the UK Department of the Environment, Transport and the Regions.
vi Estimated from American Public Transit Association and National Transit Database information.
vi The Las Vegas system was also competitively tendered without outside encouragement, but involved establishment of a completely new system, rather than conversion.
viii The Denver competitive tendering experience is also detailed in a recent book by Jonathan Richmond (The Private Provision of Public Transport, JFK School of Government, Harvard University, 2001). The book is largely a narrative with virtually no financial analysis and evoked the following reaction in a letter from RTD CEO Cal Marsella to the publisher: “blithely trivializes a subject about which a significant amount of valid, empirical data exists... reduces what should be a critical technical analysis of service and cost issues based upon actual experience to a superficial discussion of ‘ideology.’” ... The most serious shortcomings of Mr. Richmond’s work is that he totally abandons any responsibility to honestly investigate the issue at hand and simply descends to ‘talk show’ interview format where the most tantalizing tidbits are represented as facts and the essential factors relating to his ‘research’ topic are relegated to a summary of political commentary.”
xii This research was considered and not considered convincing by the Colorado legislature in 1999 when the competitive tendering mandate was expanded to 35 percent. The driving factor in this decision was the cost savings that had been documented in a number of studies, including Mundle-Kraus-Cox, KPMG Peat Marwick and the public transport agency itself.
xiii This study was commissioned after concern was raised that RTD had provided the state legislature with misleading comparison information between contractor and internal costs. With respect to the procurements covering the 1994 to 1999 period, RTD required contractors to supply new buses (with an RTD option to purchase the vehicles at any point), instead of providing the buses through a nominal lease. This resulted in extraordinary costs for RTD, which would not have been incurred if the normal approach to bus purchases had been utilized (cash purchase by RTD). This resulted in extraordinary costs for RTD, which would not have been incurred if the normal approach to bus purchases had been utilized (cash purchase by RTD). RTD had advised the state legislature that private costs had escalated to the point that there was little difference from internal costs per hour. The convergence of costs was a direct result of including capital and financing charges in the private costs, but not in the public costs. The Mundle-Kraus-Cox report found that $36 million in financing charges, taxes, license fees and attributable contractor profits would not have been avoided if RTD had not required private provision of buses. Mundle-Kraus-Cox were able to find no record of any financial analysis with respect to the issue. There are at least three reasons why RTD might have incurred higher costs through private provision of vehicles: (1) RTD had been generally opposed to competitive tendering and internal management may have intended to artificially force competitive costs higher in an attempt to convince the legislature to repeal the competitive tendering mandate. (2) RTD simply did not know that higher costs would result, or
(3) Paying higher costs through contractors over a longer period of time could have aided RTD's cash flow, during a period that it was constructing the initial $115 million light rail line.


xv During the 1994 to 1999 contract period, RTD required contractors to supply new buses. PFM did not exclude the vehicle financing charges from its analysis.

xvi First year of the National Transit Database reporting system.

xvii Incremental service divided by incremental expenditures.