

## **COMPETITION IN PUBLIC TRANSPORT: INTERNATIONAL STATE OF THE ART**

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### **COMPETITION, MONOPOLY AND PUBLIC POLICY**

**Public policy favors competition over monopoly.** In the United States, and increasingly throughout the world, public policy relies on the competitive market to establish the price and quality of goods and services. In the market, customer preferences drive the prices of competitive firms lower, while maintaining or improving product quality. At the same time, public policy seeks to avoid monopoly.

Governments grant private monopolies only where they perceive there to be no alternative. But because monopoly raises consumers prices and limits production, governments subject private monopolies to regulation to replicate the lower costs and higher quality that would be produced by the competitive market if monopoly were avoidable. Further, government seeks to eliminate private monopolies where technology advances or other factors make it feasible. Thus, governments have converted monopolistic industries such as long distance telecommunications to competition. And governments are beginning to convert electric utilities and local telephone service to competition. Similarly, governments around the world have converted regulated oligopolistic industries to competition. (Such as airlines, rail transport, and intercity buses).

However, government's approach to monopolies it owns is different: government monopolies are typically not subjected to regulation. Yet, there is considerable evidence that government monopolies are subject to the same pitfalls as private monopolies. They tend to produce services for more than necessary (at above competitive rates), and service quality is often inferior. Moreover government is prone to use its monopolies to address non-transport purposes, such as labor or fiscal policies. This interferes with the monopoly's ability to achieve its public purposes.

**The trend toward competitive government:** Governments have begun to recognize the drawbacks of government monopoly and are turning to service delivery mechanisms that improve public performance through the injection of competition (privatization). The principal privatization strategy has been competitive tendering, through which a public agency obtains a particular public service through the competitive market, guaranteeing service to the public, while reducing costs. Competitive tendering has been implemented by socialist, liberal, and conservative governments in response to intensifying fiscal challenges. European and Australian governments have adopted competitive tendering to assist in the reduction of their taxation rates as a percentage of gross domestic product, without reducing service levels. In some applications, competitive tendering has been adopted to expand services.

Throughout the developed world, the government monopoly approach has driven public transport costs to well above market rates. As a result, governments are converting public transport systems to competitive approaches, especially competitive tendering. In a related development, some governments are imposing or considering imposition of unit cost regulation on portions of public transport systems not yet subjected to competition. Copenhagen limits unit costs of non-competitive services to the average rate of competitively tendered services. Proposals to impose RPI-X or CPI-X (Retail Price Index or Consumer Price Index) regulation on non-competitive

public transport unit costs advanced through lower legislative houses in Washington (with respect to Seattle) and Colorado (with respect to Denver) in 1997.

By reducing unit costs, governments seek to keep fares affordable, maintain or expand services, and maintain the competitive position of public transport relative to the automobile.

## **COMPETITION IN PUBLIC TRANSPORT: SUMMARY OF THE SITUATION**

**North America:** Approximately 10 percent of fixed route and more than 70 percent of door-to-door service is competitively tendered in the United States. In addition, 30 percent of US school bus service and more than 50 percent of Canadian school bus services is tendered. All suburban bus service is competitively tendered in Montreal, while smaller public transport systems are competitively tendered in British Columbia, Alberta, Saskatchewan and Ontario. More than 1,000 buses operate commercially into New York city from New Jersey.

**Europe:** The European Union is encouraging conversion of public transport systems to competitive tendering:

*... the concession system (competitive tendering) - where services are subject to open tender but within a defined operational framework - is well suited to providing an environment which gives incentives to operators to raise standards whilst safeguarding system integration which is particularly important to urban and regional transport. The Commission ... will look at ways of promoting the concession (competitive tendering) system.*

**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 competitive tendering 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.

**Rail Services:** Conversion of light rail and metro systems to competitive tendering has begun or is planned in Sweden and Australia, while British and some European inter-city rail are being competitively tendered. Commuter rail services are being competitively tendered in Sweden, Germany, and the United States.

**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 very high in Japan. Ridership in Tokyo-Yokohama is three times that of the US or the UK, and ridership in Osaka-Kobe-Kyoto is equal to that of the US or the UK.

**Caracas, Santiago (Chile) and Bamako (Mali)** have closed their publicly operated bus systems and converted to commercial operation. **Sao Paulo** has similar plans. Santiago uses competitive tendering to award central city bus routes (operators pay for the right to provide service). **Seoul** has closed its public bus system, with all services now provided by private companies.

**Istanbul and Calcutta** are increasing the percentage of services provided by private operators. In many urban areas, private operators, especially mini-bus operators, carry the overwhelming percentage of riders.



In South Africa, more than 40 percent of work trips are carried by private operators using unsubsidized "kombi-taxis" (minibuses). Ownership of kombi-taxis industry has been one of the most important sources of capital formation for Blacks. In the **Johannesburg** area a bus-taxi lane has been built from Soweto to downtown Johannesburg.

**Formerly communist nations:** The most extensive government operations are in formerly communist nations, but private operation is expanding.

- **Moscow:** An estimated 50 million passengers are carried by private fixed route taxis --- approximately as many riders as are carried in Adelaide, Cleveland or Antwerp.
- **Ukraine:** Hundreds of private buses are now operating in cities throughout this nation. Private buses account for 20 percent of public transport service in Odessa.

The balance of the report deals with competitive tendering, which is emerging as a primary public transport service delivery mechanism in highly automobile dependent nations.

## WHAT IS COMPETITIVE TENDERING?

The public authority purchases public transport services from the competitive market, awarding service contracts to the lowest responsible and responsive proposer. Competitive tendering is also called "public-private competition" since public agencies may also compete for services. The public authority retains full control over policy, routes, schedules, fares, and, vehicle livery, and service standards. Virtually all policy and service decisions are the prerogative of the public agency. Contractors simply provide the services specified by the public agency at the fares specified by the public agency. To the customer, the public transport system remains an integrated whole with no apparent changes. Public agencies may competitively contract public transport routes, regions, operating facilities, or specialized services (such as door-to-door service for the disabled).

## COMPETITIVE TENDERING AND COSTS

Competitive tendering lowers costs both directly and indirectly.

**Direct Savings:** Direct savings are the difference between the non-competitive cost of operating a service and the market based cost established through competitive tendering. Direct savings may occur from award of contracts to either private firms or public transport agencies, which then produce services at market rates. The direct savings from competitive tendering have been from 20 percent to 60 percent compared to the costs of the non-competitive services replaced.

**Indirect Savings:** Indirect savings occur in remaining non-competitive services in response to competition or the genuinely perceived threat of competition. There are two broad categories --- the "run-up" savings and "ripple effect" savings

- **"Run-Up" Savings:** Anticipation of competition produces substantial savings in non-competitive services over a short period of time as public transport agencies improve their cost effectiveness during the "run-up" period preceding a short term conversion to competitive tendering. At the end of the "run-up" period, public agency costs must be at market rates for it to successfully compete for contracts. "Run-up" savings typically occur in conversions taking five years or less.

- **“Ripple Effect” Savings:** The “ripple effect” produces more moderate savings in more gradual conversions as public transport agencies reduce the cost of their non-competitive services in response to competition. The “ripple effect” drives public agency costs toward market rates, a level that must be achieved by the end of the conversion period for the agency to compete successfully.

Governments also gain financially from the higher tax revenues that are paid by private contractors. Public transport operators, unlike private companies, are typically exempt from considerable amounts of taxation.

## COMPETITIVE TENDERING AND EMPLOYEES

**Most government purchases are competitive:** Reflecting the public policy preference for competition, public transport agencies are generally required by law to obtain goods and services through the competitive market, usually through competitive bidding.

**Competitive tendering extends competitive purchasing to labor:** Competitive tendering for public transport service extends the discipline of competition to virtually all functions of a public transport agency. Competitive tendering produces savings from administrative efficiencies, more productive work rules, and market determined labor compensation (contractor work forces may be union or non-union, depending upon the preference of contractor employees). By making it possible to increase service levels, public transport operating jobs are created that would not otherwise be created, reducing unemployment, unemployment compensation and welfare expenditures. For example, San Diego has increased its bus service level by 47 percent, while its operating budget has increased by only three percent as competitive tendering has lowered costs.

## COMPETITIVE TENDERING AND SERVICE QUALITY

Competitive tendering has produced quality public transport service. For example:

- Audits by big six accounting firms in Los Angeles and Denver found competitively tendered service to be equal to or better than publicly operated service.
- London Transport found that competitively tendered service was generally of higher quality, and that when the public operator provided service in a competitive environment (faced with the threat of contract cancellation, like private carriers), service quality improved on the *same* services.
- Competitively tendered services have been evaluated as equal to or better than non-competitive services in Copenhagen and Stockholm.

Competitive tendering can also assist public agencies in maintaining fleet quality, by requiring contractors to provide vehicles. This is a particular concern in multi-modal systems, where bus capital purchases can be deferred by the heavy capital requirements of rail systems.

Contractors have a genuine interest in providing quality service. Operating in a competitive market, contractors try to establish and maintain a reputation for service quality, which encourages renewal options by public agencies and award of new contracts. Ultimately, service quality is the responsibility of the public agency, not the contractor. Effective public administration will quickly take remedial action to ensure sufficient service quality, through the imposition of contract penalties for insufficient performance and termination in the most extreme (and rare) cases.



## SEPARATION OF POLICY FROM OPERATIONS

Virtually all complete public transport system conversions to competitive tendering have been associated with governance reform through "separation of policy from operations." With separation of policy from operations, the public transport agency's role is focused on the mission of maximizing service and ridership within public resource constraints. It is limited to establishing and administering the public transport system and forbidden from directly operating service. The public transport agency purchases all of its services competitively from public and private operators. Separation of policy from operations removes the potential conflict of interest that occurs when an agency evaluates its own proposals and proposals from external organizations.

## DESIGNING COMPETITIVE TENDERING

Four factors are important to the success of competitive tendering.

1. **Administrative commitment:** The agency administering the public transport system should be driven by an ethic that places delivery of the maximum amount of service within the constraints of the available funding. Separating policy from operations has been effective in achieving this end.
2. **Full public policy control:** The public agency should specify routes, schedules, fares, and service standards.
3. **A competitive market:** More intense competition lowers costs and improves service quality. This can be accomplished by various strategies. Contract sizes should be small enough to encourage competition by smaller, local firms, as well as national and international firms. Labor and all other rates should be determined by the competitive market (not specified by the tendering agency). Contracts should be re-bid at least every five years. And, all rates should be specified in the contract for the entire term (there should be no post-contract negotiation of rates).
4. **Skilled contract administration:** Public agencies should actively manage contracts to ensure that they receive the value for which they have tendered.

## EXAMPLES

**London:** London is converting its entire bus system to competitive tendering. London Transport (LT) has the developed world's largest public transport bus system with more than 5,000 buses and carrying 1.1 billion annual linked trips. Under a parliamentary mandate, LT has competitively tendered 57 percent of its bus services. During 1997, competitive tendering will be expanded to approximately 80 percent; conversion to 100 percent will be completed in 1999. Nearly 40 companies provide service under more than 150 competitive contracts. Policy is separated from operations. LT usually competitively contracts by public transport route but has competitively tendered areas as well. Companies may receive a single contract extension if their services have met quality standards and if they are willing reduce their cost per kilometer by at least 2.5 percent during the extension period. The quality of bus service has improved substantially. Policy is separated from operations.

- Services have been expanded 28.7 percent over 11 years (1985-1996), while operating expenses have been reduced 30.0 percent (inflation adjusted).

- Costs per vehicle kilometer have dropped 45.7 percent, an annual cost per kilometer reduction of 5.4 percent.
- Ridership is up three percent compared to a nearly 30 percent decline outside London, where public transport has been deregulated rather than competitively tendered.
- The public operator won more than half of the competitive contracts until it was divided into eleven firms and sold to private investors (including management and employee buyouts). These companies continue to operate most of the service, but at market rates.
- Before competitive tendering, passenger fares covered 60 percent of operating and capital costs. In 1996, passenger fares covered 94 percent of costs. In contrast, passenger fares cover barely 50 percent of operating costs in the largest US public transport systems.
- In this competitive environment, London Transport has been able to improve Underground (subway or heavy rail) cost effectiveness to the point that fares now exceed operating costs (not including capital costs).

**Copenhagen:** Copenhagen is converting all of its bus service to competitive tendering. Copenhagen Transport administers a public transport system of 1,100 buses, carrying 190 million annual linked trips. The Danish parliament has mandated that the Copenhagen public transport bus system be converted to competitive tendering. Copenhagen now competitively contracts 56 percent of its system and will convert the balance by 2002. More than 20 operators provide service under competitive contracts. The rate paid for non-competitive services (provided until conversion by the former public monopoly) is limited to the average rate paid to contractors. Copenhagen Transport credits competitive tendering with reversing its falling ridership trend. Policy is separated from operations.

- From 1989 to 1996, total operating costs declined by 18.5 percent (inflation adjusted), while bus services were expanded by five percent.
- Bus costs per kilometer have declined by 22.3 percent (inflation adjusted).

**Stockholm:** Stockholm is converting all of its bus and rail services to competitive tendering. Stockholm's public transport system consists of 2,000 buses and 900 rail cars. Annual ridership is 570 million linked trips. The Swedish parliament enacted public transport reforms that led to a national conversion to competitive tendering. As of 1995, Stockholm competitively contracts approximately 60 percent of both its bus services and its rail services (metro, light rail, and commuter rail). Remaining non-competitive services will be competitively tendered in the near future. According to the public transport agency, "Quality has, at a minimum, been retained unchanged." Policy is separated from operations.

- Competitively tendered bus services are 32 percent less costly than non-competitive services.
- Since beginning the conversion, total bus operating costs have declined 18.5 percent (inflation adjusted), while bus services have been expanded by 2.8 percent (1992-1995).
- Bus costs per kilometer have declined 20.3 percent in three years.

**British Rail:** Britain's intercity and commuter rail system was divided into 25 train operating



companies. The Office of Passenger Rail Franchising has awarded competitive franchises for each of the companies for periods ranging from five to 15 years. As financial performance improves, some routes will generate a premium (profit) for government. The infrastructure is owned, renewed and maintained by "Railtrack," a privatized utility, and funded primarily through access charges on the train operating companies. "Railtrack" also performs the function of traffic control, similar to that of an air traffic control system. Vehicles are owned by rolling stock leasing companies. The franchisees will hold exclusive rights to their services and under current contracts will invest £1.6 billion in new rolling stock. Present government policy anticipates opening passenger routes to competition after expiration of the initial franchises. Under the current franchises, government expenditure will fall from £1.8 billion in 1998 to £0.9 billion by 2003 (a reduction of 50 percent). Minimum service levels are established through the franchising process.

**United Kingdom Outside London:** All bus services were deregulated in 1986 as required by an act of Parliament. Non-commercial services are competitively tendered by local authorities. More than 75 percent of services are provided commercially (without subsidy). Operating costs per vehicle kilometer have declined by 45 percent (inflation adjusted). However, ridership has dropped by 27.5 percent. Cost savings have been similar to that of competitive tendering in London, while ridership losses have been greater.

Table #1 London & Outside London Results: 1986-1995			
Indicator	London	Outside	Combined
Total Costs	-23.5%	-28.9%	-27.1%
Service Kilometers	30.4%	28.6%	28.8%
Unit Cost (Per KM)	-41.4%	-44.7%	-43.4%
Passengers	1.3%	-27.5%	-21.6%

**Finland:** Conversion of all bus services in the Helsinki metropolitan area to competitive tendering was begun and completed in 1995. The conversion was encouraged by an act of the national parliament. Policy is separated from operations.

**Other Europe:** Bus competitive tendering has begun in the Netherlands (South Limburg) and competitive tendering legislation is being considered by Parliament. Rail services are to be competitively tendered in the Rhine-Ruhr region of Germany.

**Adelaide:** The South Australian state government is requiring that all Adelaide bus service be converted to competitive tendering over a seven year schedule. The first contracts were awarded in 1995 and approximately half of the system is now competitively tendered. Urban rail system will then be competitively tendered (tram and commuter rail). In preparation for tendering, costs per kilometer of the government owned bus system have been reduced by 11 percent. The government owned operating facilities and vehicles will be made available to contractors, at market lease rates, with the eventual intention to sell unnecessary facilities. Policy is separated from operations.

**Brisbane:** The Queensland state government is requiring the Brisbane system to improve cost per kilometer by 30 percent or under threat of conversion to competitive tendering.

**Melbourne:** The Victoria state government competitively tendered the Melbourne bus system in 1993. Cost savings have been achieved and the government has been able to avoid the expense of renewing the bus fleet (which is being undertaken under the service contract). The government

intends to offer benchmark based contracts to non-competitive private companies in 1997, under threat of competitive tendering. Policy is separated from operations.

**Perth** has competitively tendered 50 percent of its bus system, with the intention of competitively tendering the entire bus system over a seven year period, required by the Western Australia state government. The urban rail system will also be competitively tendered. In preparation for competitive tendering, the government owned bus operator reduced its subsidy per kilometer by 18 percent during the "runup" to competition. The government owned system has also begun selling over-built or redundant capital facilities such as its central maintenance facility. Policy is separated from operations.

**Sydney:** The New South Wales state government has the threat of competitive tendering to substantially improve the performance of its central city Sydney public transport system (suburban services are privately operated), which operates 1,400 buses and carries 200 million *linked* trips. From 1986 to 1996, total bus operating costs have declined by 22.4 percent, while service has been expanded by 10.4 percent. Operating costs per kilometer have dropped by 29.7 percent (inflation adjusted). Competitive tendering is expected to commence early in the next decade.

**Auckland:** The impacts of Auckland's conversion were delayed by a national government policy that allowed the former public monopoly operator a 25 percent preference in first round competitive tenders (the policy applied only to Auckland). With the second round now complete, service levels have increased 16.5 percent from 1990, while overall costs have declined by 21.2 percent --- a 33.5 percent reduction in cost per kilometer (calculated from data Auckland Regional Council data).

**Christchurch:** Conversion reduced public subsidies by more than 40 percent from 1990 to 1996.

**San Diego:** San Diego has converted 37 percent of its bus system to competitive tendering since 1979. San Diego is continuing its conversion at a rate that guarantees the jobs of present public transport agency employees (there have been no layoffs). More than 100 buses are now competitively tendered. Policy is separated from operations.

- Competitively tendered costs per vehicle kilometer are 50 percent below 1979 costs and 34 percent below the non-competitive costs of the public operator.
- In the competitive environment, system-wide bus costs per vehicle hour have dropped 30 percent (inflation adjusted). From 1979 to 1996, bus costs were \$475 million less than if costs had risen at industry rates. This is nearly \$100 million more than San Diego spent to build its first *two* light rail lines (inflation adjusted).
- System-wide bus costs have risen three percent, which has made it possible to increase service levels by 47 percent since 1979.
- "Ripple effect" savings have reduced the costs of non-competitive (former public monopoly) service by 25 percent per vehicle hour (inflation adjusted).
- The former public monopoly has won competitive contracts.

**Las Vegas:** Fast growing Las Vegas has converted its entire public transport system from private monopoly operation to competitive tendering --- the first such complete conversion in a major US urban area. Las Vegas operates 190 buses and carried 32 million unlinked trips in 1996. Ridership



has more than tripled since competitive tendering began, placing Las Vegas among the top 25 US urban areas in public transport ridership.

- The 100 percent conversion of the Las Vegas public transport system was immediate. In the first year of operation, total operating expenditures rose 135 percent, while service levels were increased by 243 percent.
- Costs per vehicle hour dropped 33.3 percent (inflation adjusted).
- Las Vegas has the lowest unit cost of the 50 US largest public transport systems: 40 percent below average.

**Indianapolis:** Indianapolis competitively contracts 70 percent of its bus system. This was made possible through state legislation that placed state public transport subsidies under the control of the city of Indianapolis, rather than the public transport agency. Using its funding leverage, the city has placed the entire system under a "mobility manager," by which separation of policy from operations has been established. (The mobility manager is a consulting firm that oversees public transport service contracts for the city of Indianapolis.) The public operator won a major contract by an immediate cost per hour reduction of 22 percent. Since beginning competitive tendering, Indianapolis has increased bus service levels by 38.4 percent, while total operating costs have increased only 8.5 percent (1994 to 1996, inflation adjusted).

**Denver:** A 1988 Colorado state law required a partial conversion (20 percent) of Denver's Regional Transportation District (RTD) bus service. The success of the program has induced RTD to expand competitive tendering to 25 percent of its system. More than 180 buses are now competitively tendered. Policy is *not* separated from operations.

- Annual cost savings were 33 percent through 1994 and are increasing. RTD's most recent procurement yielded a savings of 41 percent and will produce \$25 million in savings over five years (approximately 60 buses).
- Since beginning competitive tendering, RTD has increased bus service levels by 25.6 percent, while operating costs have increased only 3.0 percent (1988 to 1995, inflation adjusted). In contrast, during the six years before competitive tendering, operating costs rose 18.8 percent, while service levels were increased by 17.5 percent.
- "Ripple effect" savings have reduced the costs of non-competitive (former public monopoly) service by 11 percent per hour (inflation adjusted).
- From 1988 to 1995, bus costs were than \$120 million less than if costs had continued to rise at the previous rate.

**Houston:** Houston's Metropolitan Public transport Authority (MTA) recently competitively tendered an entire operating division of approximately 140 buses. MTA expects to save 39 percent compared to non-competitive operating with gross savings over five years of more than \$45 million. Policy is *not* separated from operations.

**Los Angeles:** Public transport operators in the Los Angeles have recently reached the 20 percent competitive tendering level, consisting of approximately 550 buses (the largest number of competitively tendered buses of any US urban area). In the late 1980s, Los Angeles competitively tendered public transport routes that were threatened with cancellation as a result of financial

constraints. Ridership on the competitively tendered routes increased 150 percent in contrast with the overall downward trend in Los Angeles. In an independent audit, Price Waterhouse reported:

- Cost savings of 60 percent savings per kilometer.
- Better service quality: An improvement in service reliability of over 300 percent, a 75 percent reduction in passenger complaints, and virtually the same safety performance relative to the public operator.

In addition, fares on the competitively tendered services have been kept lower than on the regional system because of the lower costs. Policy is separated from operations.

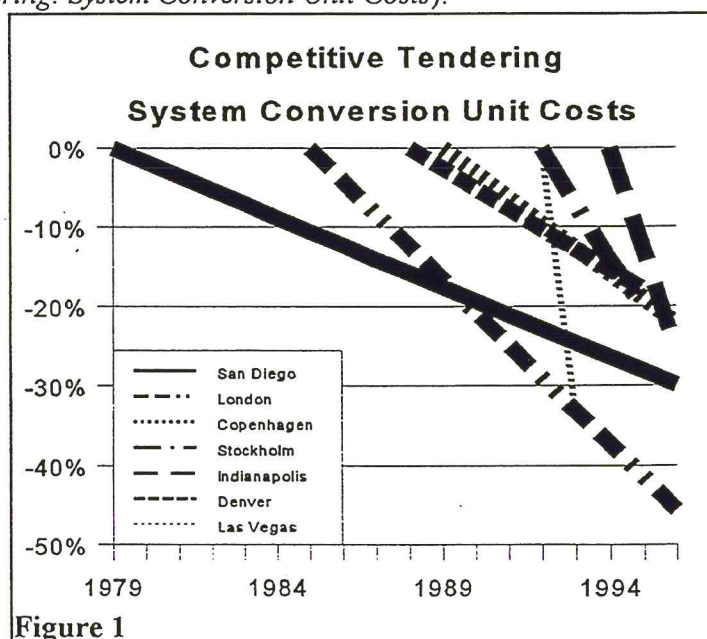
System	Period	% Converted	Total Costs	Service Level	Unit Costs	Annual Unit Cost Change
Auckland	90-96	100%	-21.2%	16.5%	-33.5%	-7.6%
Denver	1988-95	25%	3.0%	25.6%	-18.0%	-2.8%
Indianapolis	1994-96	70%	8.5%	38.4%	25.9%	-13.9%
Kobenhavn	1989-96	56%	-18.5%	5.0%	-22.3%	-3.5%
Las Vegas	1993-94	100%	135.0%	243.0%	-33.3%	-33.3%
London	1985-96	57%	-30.0%	28.7%	-45.7%	-5.4%
San Diego	1970-96	37%	2.7%	46.6%	-30.0%	-2.1%
Stockholm	1992-95	59%	-18.5%	2.8%	-20.3%	-7.3%

All costs inflation adjusted.

## COMPETITIVE TENDERING COST REDUCTION PATTERNS

Larger public transport system unit cost reduction rates tend to be associated with faster rates of conversion (Chart: *Competitive Tendering: System Conversion Unit Costs*):

1. **Immediate conversion produces the greatest cost reduction rates:** Immediate conversions of public transport systems have produced immediate and direct system-wide cost reductions to market rates (examples: Las Vegas, New Zealand, and Melbourne).
2. **Phased conversions produce more moderate cost reductions:** Phased conversions of public transport systems are being completed over periods of





three to 15 years or longer. Short term conversions (five years or less) routinely produce "run-up" savings that reduce costs per kilometer by 15 percent or more (such as Perth, Adelaide, Copenhagen, Stockholm), with market rates achieved at the end of the conversion period. "Ripple effect" savings have been associated with longer term public conversions (such as San Diego and London)

3. **Ad-hoc competitive tendering programs tend to produce savings on competitively tendered services only:** Public transport systems have converted portions of their services with no long term intention to convert all services (most U.S. cases). While direct savings occur, neither "run-up" nor ripple effect savings are typical, because the public transport operator does not perceive a genuine threat of further competition.

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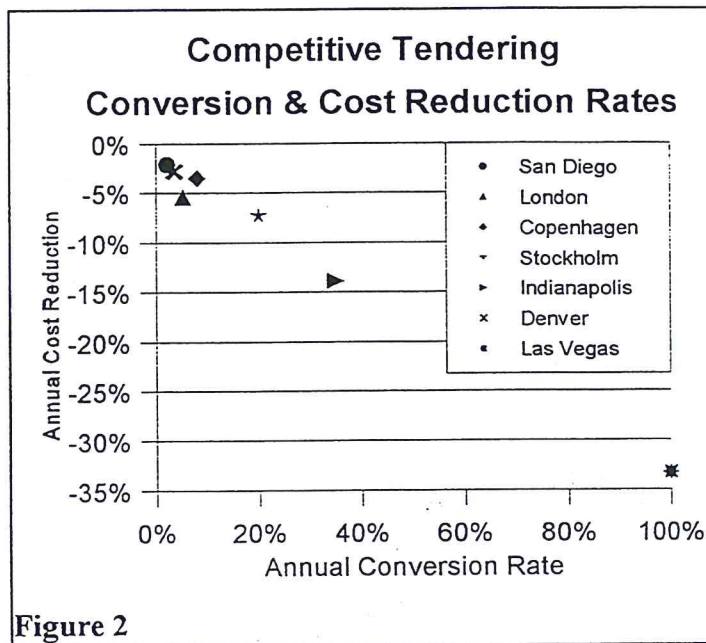
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