

CONTRACT OPTIONS FOR PRIVATE ENTERPRISE BUS SERVICES

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Abstract:

In overseas countries, centralised transport authorities have for many years entered into contractual arrangements with privately-owned services to supplement publicly-owned networks.

This practice will spread in Australia during the 80's. Victoria has already legislated to allow the State Minister of Transport to enter into contracts with private bus operators, and similar action has been foreshadowed in other States.

This paper considers the factors which must be taken into account in costing a transport service, and evaluates the options which exist for translating these into contract form.

It notes methods used overseas and in Australia and suggests an alternative approach which recognises the differing cost elements in transport operation.

Advantages and disadvantages of each contract format, applying to both operator and contractor, are briefly outlined to provide a basis for discussion of each.

BUS CONTRACTS

INTRODUCTION

The use of contractors - private enterprise or publicly owned bodies - to provide public transport services in urban areas is widespread throughout the world.

In the United Kingdom, Passenger Transport Executives contract with National Bus Company subsidiaries, British Rail, and municipal undertakings to create a unified transport structure for their areas. In the U.S.A., there are extensive "pockets" of private enterprise operations forming part of an overall network; currently, the state of New Jersey relies almost entirely on a contracted private enterprise company for its public transport. In many major European cities the pattern is similar - private enterprise companies link with city/state-owned bodies in well-developed transport communities.

The reason for these developments is common to all areas, and not hard to define. In developed countries of the Western world, profit has gone out of public transport - the farebox can no longer cover the full costs of a transport operation subject to major problems of "peak" demand and competition from the desideratum of most travellers - the private motor car, with all its inherent attractions for the individual.

So that, if a public transport network is to be provided - and communities demand that it shall - governments must step in and provide it. And in doing so, many have recognised the advantages inherent in using the skill and expertise already existing in smaller, mostly privately-owned operations.

THE AUSTRALIAN SITUATION

The "no-profit" situation - well established in publicly-owned transport operations in Australia - is now spreading rapidly to the private enterprise sector.

Three major capitals - Brisbane, Sydney and Melbourne - rely heavily on private enterprise bus services for part of their public transport system. In almost every Australian provincial city and town, only private enterprise provides public transport.

The attention of State governments has therefore turned to methods by which transport services operated by private enterprise, operating at costs much lower than for Government services, (see Wallis 1979), can be sustained.

Subsidies have provided an intermediate solution in certain areas.

The ultimate answer could well lie in a system of contracts on a scale not yet seen in Australia. This paper

reviews existing contracts and suggests several options for the design and administration of contract schemes for urban public transport.

ESSENTIAL FEATURES OF A CONTRACT

It is self-evident that any transport contract must cover known costs, and offer the contractor a margin for his investment and for his expertise.

The cost elements of a transport operation can be grouped in two categories: time-dependent and distance dependent.

Time dependent costs include :

Overhead and Administration Costs) both long term
Depot Facility Costs.

Crew Costs
Vehicle "fixed" costs - registration,)
insurance, etc. and in urban) short term
service, depreciation)

Distance - dependent costs are essentially those related to vehicles and include fuel, oil, tyres, repairs and maintenance.

While depreciation costs are sometimes related to distance, the comparatively small distance covered annually by route service vehicles (typically ca. 40,000 km in Australia) brings out time as the more critical of the two elements.

EXISTING CONTRACTS - AUSTRALIA

Bus operation contracts already exist in Australia for such functions as :

- (a) School services, notably in country areas
- (b) Replacement of branch line rail passenger services
- (c) Urban transport in South Australian provincial cities and towns
- (d) In 1978, the Victorian Government legislated to permit the Minister of Transport to enter into contracts with bus service operators in that State. No contracts have as yet been signed, but the subsidy scheme for private enterprise bus service existing since 1974 has been altered in format to allow easy transition to contracts, and this change is expected to take place during the 1980-81 financial year.

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FEATURES OF EXISTING CONTRACTS

School Service Contracts

Typically, payments to operators of school bus services are based on distance, and in most States are a straight-out rate per kilometre covered.

Competitive tenders are called for new services, and a "rise and fall" provision is made - usually based on a composite index of various cost factors.

In Victoria, however, the system is more sophisticated and pays heed to the distinct types of costs inherent in any transport operation.

Tenderers for school services in Victoria offer an annual price for the run concerned, but are required to back up their tender with details of how it was compiled. For each cost element, the Victorian Education Department as tendering authority has a maximum value which it will allow. These detailed estimates are used for "rise and fall" adjustments, and are set out in Appendix I.

Contractors have the right to seek adjustments to the annual rate for cost increases, no more frequently than quarterly. If the Department approves an increase in one element - e.g. "dead running by car" - and this element does not appear in the breakdown cost calculations accompanying a particular tender, then there is no adjustment made to the contract concerned as a result of the increase.

Rail Replacement Contracts

In recent years, branch line passenger rail services have been replaced by buses in Victoria, operating under contract to the Victorian Railways Board.

The Board specifies the type of vehicle required, nominates the timetable, and calls for tenders - backed by data similar to that required by the Victorian Education Department.

There is no set upper limit to any cost item, however, and the Board's practice is to interview selected tenderers, discuss their cost calculations with them, and finally select the lowest "package" offered.

A provision exists for adjustment every six months and again, the cost components of a tender are used to calculate these.

South Australia

In four provincial cities/towns, private operators contract with the local Council to provide a bus service

at an agreed rate per kilometre for route service buses, and per day for "town school buses". The contract provides that all revenue shall accrue to the Council. (The State Government assists the Councils concerned in meeting the resultant deficits). Provision is also made for adjustment as costs escalate - without any direct reference as to the method of adjustment.

The scale of each bus operation is very small, but the principle of the contracts is very similar to those which exist in European transport "communities". A central authority - (the local Council in this case) sets the timetable and fares. It pays an agreed price to the operator, who is responsible not for promotion of the service but for its satisfactory operation according to agreed standards. Revenue is not his concern - nor is the assessed community need for the service which, in a free market situation, is very much reflected in the revenue derived from it.

Victoria

Although, as already stated, no contracts for urban public transport have yet been signed in Victoria, the framework for them has been laid down and agreed with the industry.

The scheme provides for every bus/hour operated on a service, a payment equal to the difference between an industry "standard" cost and "standard" revenue. Cost escalation will be met by fare increases, unless Government policy dictates otherwise.

The Minister of Transport, as contracting authority, does not prescribe what routes shall be serviced, at what frequency or at what fare schedule. Rather is this left to negotiation between the operator and the Transport Regulation Board, which has the powers under its Act to handle such matters. In effect, the new contracts will return the private enterprise public transport services to a situation which obtained prior to the introduction of subsidies in that State, in 1974 - the only difference being that the operator receives a known contribution to the revenue for his service by contract payment for every bus/hour performed. By implication, if a service cannot survive on its actual revenue plus contract payment and meet all costs, it will be allowed to lapse. Thus the Government seeks to encourage private enterprise to preserve and foster its (public transport) business by restoring its dependence on farebox revenue, and at the same time moves away from centralised regulation and control of urban transport services.

The component parts of the current Victorian Scheme, with notes on their calculations, are set out in Appendix II.

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A EUROPEAN APPROACH

Some European cities, of which Zurich is an example, have adopted a "cost-plus" basis for public transport contracts. The cost components of providing a particular service are agreed between the operator and contracting authority, and to these is added a set percentage amount to cover return on investment. No private enterprise contractor will be content to continue a service unless his full costs are covered, and he is paid a reward for use of his capital on top of that.

An example of the approach used in Zurich, Switzerland, is attached in Appendix III.

PRESENT CONTRACT TYPES - THEIR DEFICIENCIES

The simplistic South Australian city/town contract and the school service contracts in States other than Victoria, relate payments to distance only. An extension or contraction of any route, unless of major proportions, is unlikely to affect the largest single cost in bus service operation - crew cost. In an extension, therefore, the operator gains and the contracting authority loses; in a reduction of route, the reverse is true.

The Victorian route service contract system, in its search for administrative simplicity, ignores true cost allocation in cleaving to a payment per bus/hour. The most notable error here, of course, relates to vehicle operating costs which are distance related - and the somewhat complex "averaging" process which reduces these factors to an hourly rate has produced distortions.

Average bus speeds in metropolitan Melbourne vary from approx 15 km/h to approx 30 km/h - yet all contractors are to be paid the same rate per bus/hour. The incorrect treatment of operating costs becomes apparent.

Of the contract schemes so far described, only the Victorian Education Department approach clearly considers the significance of the differing elements in transport costing - time-related, and distance-related. Computer processing solves administrative difficulties, reduces costs and speeds up adjustments to these contracts.

The "cost-plus" system obviously caters for all costs in their true perspective. But such an approach appears to be politically unacceptable in Australia - there is a fear that costs might be incorrectly included in a contract, and compounded by the percentage add-on. Yet in essence, any successful contract scheme must cover just those elements - costs plus an add-on for return on investment.

AUSTRALIAN ROUTE-SERVICE CONTRACTS - AN ALTERNATIVE

It is now suggested that an acceptable approach to contracting could be developed by constructing a contractual agreement around the three cost components of any service:

- Operational costs
- Administrative (overhead) costs
- Return on investment

Operational Costs

The contract requires to cover the direct operational costs of any defined service level, based on the number of buses required to operate it at peak plus an allowance for spare vehicles to cover maintenance requirements.

Fixed components of operational costs include, for each bus:

- (i) Registration/Licensing fees.
- (ii) Insurances, Third Party and Comprehensive.

Variable components include :

- (i) Crew costs, based on efficient work rosters paid in accordance with the appropriate industrial award, plus on-costs such as payroll tax, workers' compensation insurance, superannuation, sick/holiday relief, etc.
- (ii) Running costs, including fuel, oil, tyres, repairs, maintenance. Standard costs should be established for each sub-component; the Transport Regulation Board (Victoria) has built up a running cost component from engineering data and averaged fuel consumption for subsidy/contract purposes in that State (See Appendix II)

Administrative (Overhead) Costs

Components comprise :

- (i) Managerial/Admin. salaries - to be agreed in accordance with a scale proportional to the size of an operation, e.g.
 - 1 - 5 buses: \$15,000 p.a.
 - 5 - 10 buses \$20,000 p.a.
 - 50 -100 buses \$60,000 p.a. owner plus shift supervisors

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- (ii) Operational supervisors' salaries - depot starters, road supervisors, ticket inspectors. Again a scale would be agreed.
- (iii) Clerical staff salaries - on agreed scale.
- (iv) Depot rental, and maintenance costs - or an imputed rental where property is owned by the enterprise.
- (v) Depot operating and incidental costs:
Phone, light, power, stationery and printing, postages, insurances, etc.

Multi-purpose fleets (i.e. those incorporating route service, charter and/or school contract vehicles) would require a split of certain of these costs on an agreed basis, which could be based on the numbers of vehicles of each type in the fleet.

Return on Investment in Vehicles

Possibly the most contentious issue. The return must allow an operator sufficient funding to replace his fleet, and to earn a return on his investment at better than risk-free rate. (The fact that a contract is involved should permit a lower return than in a full free-market situation, but there are still risks - loss on sale of capital equipment at the end of the contract, etc.)

Dunkley Tune and Co. (1973) drawing on an earlier work by Gilmour (1973) suggested that a rate of 25% on funds employed was appropriate.

There is however, difficulty in defining "funds employed" and this present approach suggests a relationship to assets rather than funds.

Depot buildings have already been covered.

For vehicles, it is suggested that this component should comprise:

- (i) A "replacement" element equal to 10% p.a. on present market value of vehicles - a percentage geared to experienced/expected inflation rate.
- (ii) A "return" element set at 2% p.a. above the long-term Government bond rate at commencement of contract - approx. 12% p.a. today.

The combined 24% p.a. would be payable on present market value of vehicles used in the contract irrespective of actual ownership - it would cover costs of financing through leasing, hire purchase, etc.

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Contract Administration

It may seem that administration of a contract as defined above could be cumbersome. No contract would be signed which did not incorporate "rise and fall" provisions, and adjustment would need to be made as each sub-component varies. But the costing structure need be agreed once only, and variations processed regularly using a suitable computer programme.

Further, the method proposed is flexible in that passenger revenue accruing to a contracted service could either be -

- (i) Retained by the operator as an offset to the contract payment or
- (ii) Paid to the contracting authority - a method which would enable private enterprise bus operations to be integrated closely with other modes or ownerships under an overall transport authority for any city.

SUMMARY

By segregating the distinct types of costs inherent in a bus operation, and according them appropriate treatment in a contractual situation, a contract can be prepared and administered to ensure equity for the operator and the community he serves.

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APPENDIX I

VICTORIAN EDUCATION DEPARTMENT SCHOOL BUS SERVICE CONTRACTS
COST ELEMENTS

<u>ITEM</u>	Method of Treatment (Maximum Value allowed in Contract)
1. Driver's Wages	47 weeks (43 weeks' school terms plus 4 weeks' leave) at Award rate. Special claims allowed for extra 5 weeks where no employment other than school bus driving is available.
2. Supervisors' Wages	Where special supervision is required e.g. for handicapped children, amount tendered by contractor is paid.
3. Payroll Tax	Allowed in full where applicable
4. Workers' Compensation Insurance	Allowed in full
5. Operating Costs - Fuel Oil Tyres Repairs	Total annual distance of contract, plus "dead" running by bus between depot and start of run, is determined. A maximum operating cost per km. calculated for each size of vehicle by engine type (diesel or petrol) is supplied to the Department by Victoria's Transport Regulation Board.
6. Garaging/Adminis- tration	A fixed annual sum currently \$150 is allowed.
7. T.R.B. Licence, Regis. Third Party Insurance.	Allowed at cost.
8. Comprehensive Insurance	Allowed at an agreed scale, based on Insurance Co. premiums.
9. Depreciation	The capital value of the bus is stated by the tenderer. (For replacement buses, a maximum value is set by the Department). A depreciation allowance is payable varying from 12% p.a. of value for distances up to 46 km daily, to 15% for distance over 126 km. This allowance is payable over the open-ended life of the contract.

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| 10. Profit | 12½% p.a. of vehicle value
(Item 9) is allowed. |
| 11. Dead Running by Car
(to/from start of run) | Allowed at a determined rate,
currently 10c/km. |

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APPENDIX II

VICTORIAN SUBSIDY/CONTRACT SCHEME
PRIVATE ENTERPRISE PUBLIC TRANSPORT SERVICES

REVENUE/COST ELEMENTS PER BUS HOUR AS AT 30 JUNE, 1979

<u>Cost Items</u>	<u>\$ Per Bus Hour</u>
Drivers' Wages	5.95
Fuel	1.29
Oil	0.08
Maintenance - Parts	1.12
Maintenance - Mechanics' Labour	0.91
Tyres & Tubes	0.28
Fixed Vehicles Costs	0.61
Depreciation	0.80
Administration	2.79
Sub-Total - "Standard Cost"	13.83
Plus "Loading"	1.00
	14.83
"Standard: Revenue	8.50
Subsidy Payable	6.33

Notes on Derivation of Figures

- (i) Drivers' Wages
To the base rate for 52 weeks are added allowances for "industry average" (or typical) overtime and other penalty payments, holiday, and sick leave cover and staff turnover (driver training).
- (ii) Fuel
An assessed figure based on estimated average consumption for petrol/diesel vehicles and converted to an hourly rate by determining an industry average speed - average distance per bus divided by average hours per bus.
- (iii) Oil
Similar to Fuel.
- (iv) Maintenance Parts
Usage of replacement parts over a 10 year period was assessed by the engineering staff of the Transport Regulation Board, and cost of those parts calculated. Average distance over 10 years calculated; cost per km. derived; cost per bus hour derived from industry average speed.

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- (v) Mechanics' Labour
No. of buses per mechanic assessed. Award wage, plus overaward payment and leave loading converted to a figure per average bus/hour.
- (vi) Tyres and Tubes
Weighted average price of tyres/tubes used to determine assessed cost per km., again converted to bus/hours at average speed.
- (vii) Fixed Costs
Registration, Licence and Third Party Insurance fees (known) and comprehensive insurance (assessed) divided by average annual bus/hours.
- (viii) Depreciation
A notional figure adopted for first year of scheme only.
For 1980-81 and subsequent years, this component will vary from operator to operator. Annual cost will be calculated by dividing purchase price of the vehicles over 16 years (heavy-duty chassis) and 12 years (light-duty chassis). The total annual cost will be reduced to a bus/hour cost in accordance with the number of such hours in an operator's service(s). Wide variation will therefore occur.
- (ix) Administrative Costs
Figures from Operators' Uniform Financial Returns were averaged per bus, thence per bus/hour.
- (x) Loading
A figure set to cover interest costs, other non-specified costs, and provide a "margin".
- (xi) Standard Revenue
An industry assessed figure.

NOTE: Contract payments will be increased by:

- (a) Additional amounts for bus/hours run at "penalty" times - before 6 a.m. and after 6 p.m. weekdays; weekends and public holidays.
- (b) Additional amounts for excess "dead" running (i.e. to/from depots to termini, etc.). The present payment includes a standard allowance of 6% for "dead" hours over "timetable" hours - if an operator can demonstrate his need to incur more than 6%, there is provision for payment.

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APPENDIX III

CONTRACT MUNICIPALITY OF ZURICH
AND
J. HURZELER & CO

The table attached to this contract sets out the details of the contract costing.

The vehicles are identified as to registered number, capital cost, etc. Also includes a Volvo car.

<u>Fixed Costs</u>	<u>Annual Cost</u>	
1 Depreciation		
2 Interest		
3 Insurance		
4 Garage Rent		
5 Staff Salaries and Wages		
6 Administration		
7 Sundries	<hr/>	
Total	<hr/>	
Divided by Annual Kms		x Rate Per Km

<u>Variable Costs</u>	<u>Rate Per Kms</u>	
1 Fuel		
2 Oil		
3 Tyres		
4 Repairs		
5 Sundries	<hr/>	
Total	<hr/>	
Fixed and Variable Cost		x Rate Per Km
Profit 10% of Fixed and Variable	Cost Rate	" " "
Dead Running Kms x Variable Cost	per Km x	" " "
	Total	" " "
	÷	
	Kms	x
Contract Rate	<hr/>	" " "

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COMMENTS ON THE HURZELER CONTRACT

- 1 Contract duration is for 10 years
- 2 The contract is written to apply retrospectively
- 3 Costings is updated at least annually
- 4 Vehicles are depreciated on a varying number of years. No vehicle is over depreciated. Owners' car is included in depreciation schedule.
- 5 The contract appears to be related to the operator, particularly in regard to fixed costs
- 6 Interest has been allowed at two different rates on the purchase prices of the vehicles. It may relate to the borrowings of the operator or an agreed rate of interest relating to a particular year, i.e. there is a change of rate after the purchase of buses in 1970.
- 7 Garage Rent is based on an amount per bus. Not clear whether this is a standard figure on the actual amount paid by the operator.
- 8 Profit is based on 10% of the total cost excluding the cost of dead running.