

# **Quality Bus Partnerships – Implications for Market Performance**

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## **I INTRODUCTION**

Policy towards local bus transport in Britain has been quite sharply cyclical. The late 1960s and 1970s saw the creation of a planned approach to the provision of local bus services, associated with the creation of the National Bus Company in public hands, the development of the Passenger Transport Executives in urban areas with important planning functions, and the growth of public subsidy from minimal to very significant levels during this period. By the end of this period economic and geographically based planning methods such as the NBC's MAP, and Stephen Glaister's METS model for efficient determination of fares and service policies had been developed.

The 1980s and 1990s have seen a return to a much more commercial, market orientated approach to the provision of local bus service. The story of local bus deregulation has been told many times and will not be repeated here, but among its key elements are

- freedom for operators to decide on commercial grounds what services they wish to offer and what fares to charge;
- freedom of entry to and exit from the market subject to quality controls and a 42-day notice period;
- removal of subsidy from the centre of discussions between operators and local government to a more peripheral 'top-up' position in which subsidy is used to provide service for socially necessary routes and times which are not commercially viable;
- privatisation of nearly the whole industry, (with just seventeen operators remaining in local authority ownership) with initial fragmentation and the subsequent wave of acquisitions and mergers so that the top three firms now have over half the total industry revenue (TAS 1998);
- subjecting the industry to the general legislation on monopolies and mergers, competitive practice and restrictive trade practices, resulting in many references to the competition authorities.

So in this period, decisions within the industry have been dominated by commercial market forces, mediated to some extent by the local authorities, the PTEs and at national level, the competition authorities. Within Greater London a much greater degree of planning responsibility has been retained by London Transport; here the model has been one of operator privatisation with competitive tendering.

As is well known, the more exaggerated claims for the mystical properties of market forces have not been realised. Patronage has continued to decline despite significant increases in vehicles kms. Earlier reviews have referred to a series of interesting phenomena:

- the rate of decline was actually highest in the 1970s and has been relatively low in the 1990s. After a very unstable five years from deregulation in October 1986 through to 1992, a more stable industry structure has emerged and the rate of decline of patronage has slowed;
- London has performed much better than the rest of the country. It is tempting to attribute this wholly to the regulatory environment, but in practice public transport in London has other different characteristics – heavy congestion, parking difficulties, free fares for pensioners, the large tourist market all mean that it has been able to hold its market share better than other cities. Also, the many difficulties in London in the mid 1980s meant that the growth in London is part recovery from a low base. Nevertheless, many observers believe that the difference in regulatory environment has also played a part;
- the rate of patronage decline outside London has been faster than can be explained by ‘conventional’ elasticities (Mackie and Preston 1996). This has been attributed to a range of factors including demographic trends, life cycle effects, changes in real motoring costs, fares effects not picked up in the fare index such as less generous concessions for schoolchildren and the elderly, and low service elasticities associated with on-the-road competition.

Particularly relevant to this paper is the proposition that quality of service is important. Particularly in the period following deregulation our studies in West Yorkshire found evidence of a loss of consumer confidence associated with increased uncertainty, loss of knowledge and information, and route/network instability. Perceived quality of service deteriorated, and this explained a significant part of the excess loss of patronage and a part of the difference between the London and non-London performance (Preston 1988).

A broader problem which has been highlighted in the last few years is the difficulty of ensuring that buses realise their full potential in contributing to the package of measures for dealing with the problems of urban congestion and pollution. It is not clear that a regime based on commercial market forces with open entry, relatively modest quality standards and a limited role for the local planning authority sits very comfortably with the proposition that local bus transport has a key role to play in helping to address the urban transport problems of congestion. Both the previous Government and the current Government are giving a lot of thought to ways of

enhancing the quality of bus travel while retaining the commercial market environment.

## II QUALITY BUS PARTNERSHIPS

Although there is no doubt an element of political brand salesmanship, the concept of partnership as a means of delivering improvements makes good basic sense. If we consider the attributes of local bus travel, they include some attributes which are primarily the responsibility of the operator, and others which are jointly influenced by the behaviour of the operator and the local authority.

Service Dimensions	Determinants	Responsibility
Journey time Reliability	Labour/Equipment Availability	Operator
	Congestion Levels ) Infrastructure Priorities )	Local Authority
Information	Stability/knowledge Printed/Interactive information	Usually Local Authority
Comfort	Vehicle Quality ) Driver Quality )	Operator
	Traffic Environment	Local Authority
Access to system	Low Floor Buses Stops )	Operator
	Interchanges )	Usually Local Authority

A partnership approach makes particular sense in the ‘carrot and stick’ context where local authorities are considering measures such as urban congestion charging or workplace parking levies, but must deliver improved public transport in advance, or at least alongside, as a precondition of the introduction of such measures.

Why doesn’t the local authority simply get on and improve road conditions for buses either by reallocating road space or giving priorities at signals or providing sections of exclusive track? There may be a case for doing this, anyway, but there are two key arguments for the partnership approach:-

- firstly, that users see bus service quality as a package so that it is necessary to address all or most aspects of the image of bus service together;
- secondly, that there should be a degree of symmetry between responsibility, action and payoff among the parties. Consider a situation in which a local authority provides a series of infrastructure measures costing £x million in a corridor serviced by private commercial bus operators. Assuming the measures are socially worthwhile on a cost-benefit test, they will either improve patronage and revenue for operators or reduce operating costs by improving speeds and vehicle productivity or both. In the absence of counterpart measures, the costs fall on the local authority, and the net revenues accrue to the commercial operators. Therefore some form of operator

contribution is warranted either directly to the infrastructure, or indirectly through the provision of new buses or other quality measures. So the question of measuring additionality on the operator side – have the operators made contributions which are additional to what they would otherwise have done – becomes important. This is significant because, for example, in the context of new buses, determining whether the operator's overall replacement policy has been influenced, or whether the ranking order of designated quality corridors against other services has been affected is not easy.

Currently, it is necessary to distinguish between the existing statutory position and the future intended position following the Transport Bill which is anticipated in the Queen's Speech this autumn.

The existing situation is that there exist or are in process of development, *voluntary* Quality Bus Partnerships (QBP). In a recent report for DETR, TAS succeeded in identifying 134 QBP but probably about a third of these are in their infancy and have not yet resulted in anything real on the ground.

Some of the better known schemes are identified in a useful paper (Knowles, 1998). Other papers discuss whether QBPs have anything to offer which cannot be achieved by sensible informal co-operation (Rye, 1999) and whether QBPs can help to bridge the gap between bus and rail/lrt by fostering a perception of 'permanence' (Harrison et al, 1998).

At least three sorts of voluntary QBP have been identified:-

- route or corridor based partnerships with various mixes of infrastructure and vehicle improvements on these corridors;
- area-wide partnerships of which the best known is the Greater Manchester countywide agreement (for details see Knowles, 1998);
- social partnerships such as those developed in Gwynedd, a deep rural area in North Wales, to help achieve better value for money in the use of subsidy support to deliver rural service.

The voluntary approach has in no sense been a bar to the development of QBPs. On the contrary, helped no doubt by a belief that forming a QBP helps to unlock access to Government funding through the Local Transport Plans, the concept has taken off. It is therefore reasonable to ask why there is any need for legislation in this area. The main reason is that within a voluntary QBP, there is nothing to prevent existing low cost/low quality operators from continuing to compete with the QBP operator (though there will be some technical restrictions eg on their access to kerb-guided busways). Nor is there anything to prevent entry to the market by low cost/low quality operators. Nor is there anything which compels all operators to participate in the QBP, thereby creating the possibility of free-riding in a multi-operator environment. The first two of these arguments raise significant regulation and competition policy issues which we shall return to in the next section.

Therefore the Government has set out its proposals to give QBPs statutory backing (DETR, 1999). Key legislative provisions would be

- *fair and open access* - no exclusion provided quality standards are met
- *QBPs are about quality standards* – they should not confer ‘favoured son’ status or be a backdoor means of rigging the competitive tendering process for subsidised services
- non QBP operators could only be excluded from those facilities being provided as part of the QBP, *not* from a route or service as a whole
- there would be a *consultation process* with all operators and with the local community before a statutory QBP was designated
- the operation of a QBP, including complaints that it was unreasonably restrictive, would be open to investigation by the Director General of Fair Trading (see next section)

The Government is also consulting on whether it should take enabling powers for bus Quality Contracts, which are essentially area franchises on the London Transport model. This clearly goes further than the Quality Partnership in permitting exclusivity on the basis of ‘best value’. This clearly has potential appeal to the local authorities and Passenger Transport Executives, since it returns to them much of the planning power lost under deregulation. But would it appeal to the operators? It depends on

- how serious a threat actual or potential competition is seen to be; our impression is that commercial on the road competition is now reduced to a relatively few routes in a few cities;
- what would be the procedures for determining ‘best value’? If by open competitive tender, the incumbent risks losing existing commercial markets, or at least having to compete to retain them;

Since operators have never favoured the franchising approach for this very reason, my forecast is that operators will be resistant to Quality Contracts on the terms which the Government would be willing to offer. Even among the PTEs, there are also doubts about placing at risk the benefits of access to private capital and decentralisation of management which the current regime offers (Carr, 1997). Quality Contracts are probably thus best seen as a device to place pressure on operators to make QBPs a success, in the process demonstrating that the existing regulatory regime plus QBPs can deliver what the Government wants to see from the local bus industry.

### **III QUALITY BUS PARTNERSHIPS AND COMPETITION POLICY**

At the same time as the new deal for transport has been developing, the Government has instituted a new Competition Act. Clearly, the QBPs do have potential implications for competition, and could in the extreme have the effect of removing the competitive fringe and/or reducing the threat of entry. The issues of compliance of

QBPs with the new Competition Act have been expertly addressed in a paper by an officer of the Office of Fair Trading (Hoban, 1998) and some key points are repeated here:-

- each proposed QBP will be scrutinised on its merits; any kind of block exemption is questionable given the variety of scope and size of QBPs;
- only agreements which *appreciably* restrict, prevent or distort competition are notifiable. It will usually be assumed that there is no appreciable effect where the combined market share of the parties to the agreement is less than 20%. This raises the question familiar in the local monopoly and merger context of the appropriate product and geographic definition to use in operationalising this rule. Is it the percentage of the bus market in the relevant corridor or something broader?
- if the agreement does appreciably restrict competition then an exemption permitting the agreement may be granted if
  - the agreement has the effect of improving productivity or distribution or promotes technical or economic progress AND
  - the agreement does not impose restrictions which are not indispensable to the attainment of the economic benefits AND
  - the agreement should *not* offer a chance for the parties concerned to eliminate competition AND
  - the agreement must pass on a fair share of the resulting benefit of the agreement to consumers

According to Hoban, 'the concern is that the ambition to facilitate modal shift (by quality enhancement) vitiates the prospect of on-road competition to the extent that entry barriers are set too high; or low cost potential entrants are banned, or restrictions are placed on the services they provide, leading ultimately to higher prices to customers'. (Hoban, op cit). It would appear that this perspective is a little different from that of the DETR. Clearly much depends on the view taken of whether the benefits of low cost/low quality service adding to aggregate route frequency, and possibly discounted fares, offset any negative externalities in terms of the image, quality and stability of public transport as a whole.

Whatever view one takes of the above, it is clear that the four criteria above lend themselves to empirical investigation; is the QBP likely to generate benefits; is it needlessly restrictive; will it eliminate competition; will a good share of the benefits accrue to consumers? Clearly it would be in the interests of transparency if an agreed framework could be devised within which to assess the impact of QBPs in relation to the four criteria, as well as permitting a broader social assessment of the pros and cons of QBPs. With that in mind, DETR has commissioned the TAS partnership and ITS, University of Leeds to conduct a research project.

## A MODEL OF THE MARKET

In order to determine the effect Quality Partnerships have on market structure and performance, a theoretical model of the market, calibrated on observed data is needed. Ideally, this model should be capable of operating at area-wide level so as to

- be capable of assessing the effects of wide area QBPs such as the Manchester county-wide scheme;
- be capable of forecasting the effects of corridor QBPs in shifting resources and competition between the quality corridors and the ‘non-quality’ corridors.

However, these are very difficult questions to address within a formal model and therefore the main modelling effort will be at the corridor level. We will therefore work on the assumption that there exist well-defined corridors which form the basis for operator strategies, which might be profit centres for operators, and which may be the subject of QBP arrangements. Although clearly not picking up all QBPs, this is a realistic description of many.

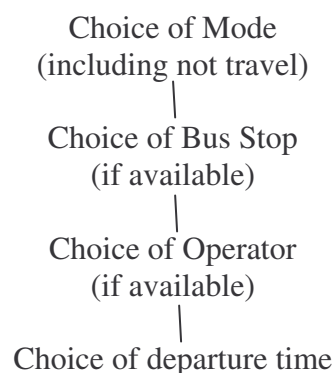
The work must be capable of dealing both with symmetrical cases in which all operators benefit from the quality measures, and asymmetrical cases in which the quality operator has exclusive rights to certain facilities such as sections of busway.

The parameters within the model must be set flexibly enough to be capable of dealing with various levels of spatial interaction and competition between routes. A general scheme is shown in Fig 1 which can be adapted to represent various cases.

A flow diagram of the model is shown in Fig 2, and each of the boxes in the flow diagram is now briefly described. The model needs to be capable of running both for a base case no QBP and with the QBP in place.

## DEMAND MODEL

The basic proposition is that, given the geographic and socio-economic characteristics of the corridor, demand for bus travel will be determined by the generalised cost of travel which users face, which will be turn depend on fares, journey time, wait time and comfort/quality. Users face a set of choices which may be simultaneous in practice but is represented as a hierarchy for ease of modelling:



Choice of mode must be represented because of the expectation that QBP s influence choices between bus, slow modes, and car; this will allow the overall size of the bus market to expand/contract as the level of service changes. Choice of bus stop must be represented to allow for bus route switching between the quality service and closely adjacent routes – there is a concern that quoted results for some quality corridors do not allow fully for this. Choice of operator must be represented to allow for various configurations of fare, service and timetable strategy. Choice of departure time is needed in order to represent peakiness of conditions and enable operator market shares to be simulated. Model outcomes will be determined by

- the relevant values and elasticities on walk, wait, in-vehicle time, comfort and fare, some of which are known with more confidence than others;
- the relevant fare and service strategies adopted by operators.

### **OPERATOR COST MODEL**

This will be a simple costing model with costs related to distance, time and peak vehicles required. Changes in the time and peak vehicle requirement as a result of quality measures, leading to changes in the costs of operating a given service will be computed. The possibility of cost differences between operators will be allowed, although evidence may be hard to find.

### **OPERATOR STRATEGY/BEHAVIOUR**

The core of the model must be the competitive interactions between operators. Thus the model must be capable of yielding insight into the conditions under which on the road competition can be sustained – which must depend on operator cost differences, diversity of consumer preferences and market density. The model needs to be run in an iterative manner to search for sustainable equilibrium solutions. Alternative assumptions about the nature of competitive interactions will be tested to determine the difference in market outcomes under different decision rules. Entry/exit will be modelled using a game theory approach.

### **COST-BENEFIT ANALYSIS**

In terms of conformity with the new Competition Act a critical test for some QBPs may be whether the benefits of the scheme in terms of ‘improving productivity or distribution’ outweigh any negative effects on competition. At least as a starting point, a cost-benefit analysis of the quality measures in terms of effects on user benefits, revenues and costs is useful. The long term effect on market contestability is much more difficult to assess, but we would argue that the market has already moved a long way to oligopoly, and that the case for and against measures to promote market contestability needs to be considered independently of quality partnerships.

### **EMPIRICAL EVIDENCE**

Clearly, many of the parameters of the above model are uncertain – the demand elasticities, the cost differences between operators, the behavioural interactions, the symmetry or otherwise of the quality measures themselves. Alongside the model



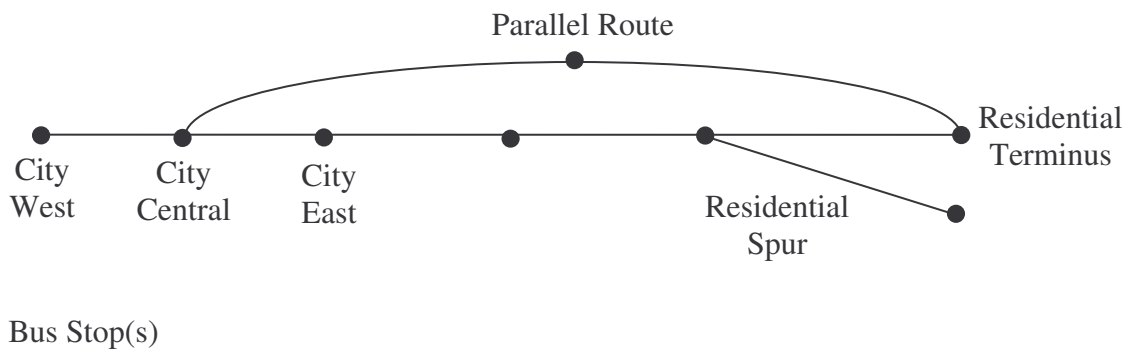
development, there is a need for a programme of empirical work to investigate what happens when various forms of quality measures are implemented. Together with the TAS Partnership, ITS will over the coming months be assessing the effects of six existing QBPs in co-operation with local authorities and operators. As well as providing a series of case study reports, the results will inform decisions on some of the model parameters and market characteristics. The intention is that this work will be used as the basis for predictive assessment of the market impacts of statutory QBPs in a later phase of the work.

#### **IV CONCLUSION**

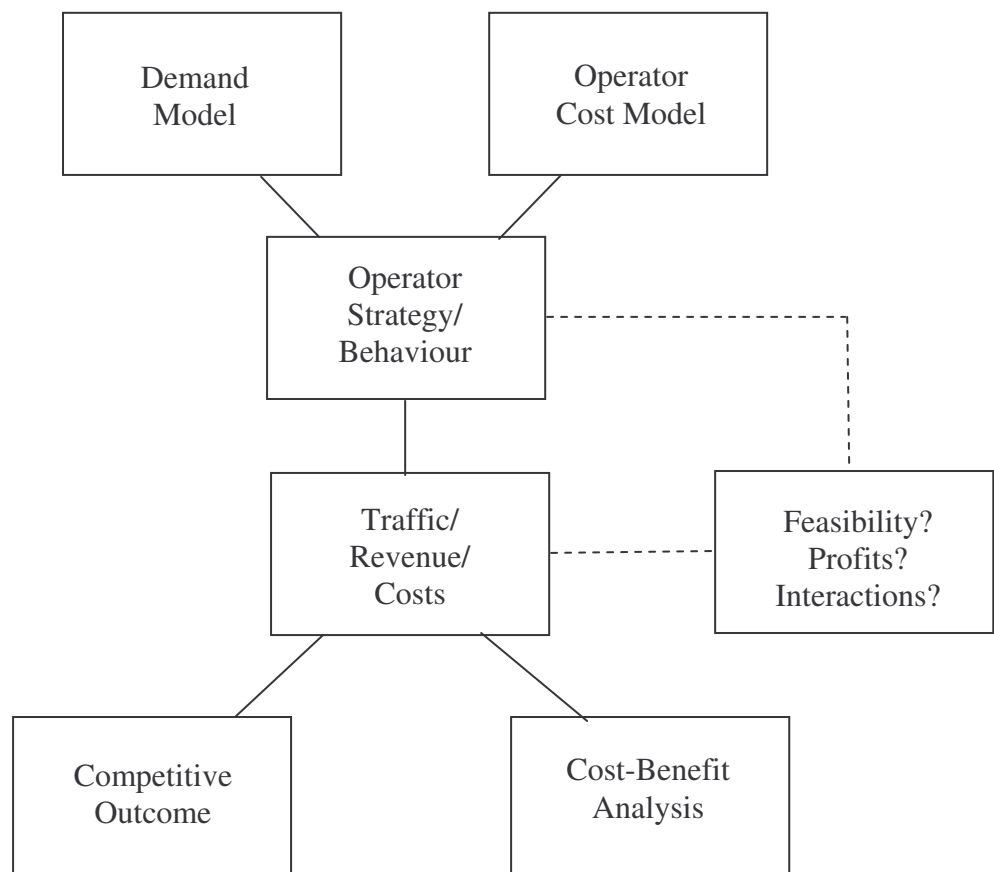
The problem of congestion and pollution in cities and towns are seen as a serious economic and social problem. Much of the Government's New Deal for Transport addresses that problem. Most commentators believe that a serious attack on these problems involves 'stick' measures which increase the perceived generalised cost of private vehicle use either by pricing measures on road space or parking or by roadspace reallocation measures.

A precondition for public acceptability of these is improved quality public transport. Improved rail transport outside London has a limited role to play. LRT is seen to be expensive and probably is the correct solution only in restricted circumstances. Improving the quality of bus services (as well as providing better quality opportunities for using the slow modes) is the main show in town. Proper economic and social assessment of Quality Bus Partnerships is therefore important.

However, Quality Bus Partnerships may give a further twist to the increased market concentration in the bus industry. This raises the question of the appropriate form of economic regulation of this industry. If contestability is dead, franchising is impractical, and specialist regulation as in the railway industry exceedingly bureaucratic, the options are limited. Perhaps there is a way of using Quality Partnerships to secure a voluntary agreement between Government and operators on profit margins in this industry.



**Figure 1: A Simplified Bus Network**



**Figure 2: A Flow Chart of the Market Model**

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## CURRICULUM VITAE

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1993-94 EC - EURET Cost benefit analysis and multi-criteria analysis for new road construction.  
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