



Public Policy Institute for Wales
Sefydliad Polisi Cyhoeddus i Gymru

A Fare Deal? Regulation and Financing of Bus Services in Wales

November 2014

PPIW Report No. 9

A Fare Deal? Regulation and Financing of Bus Services in Wales

Professor John Preston

University of Southampton

This report and the information contained within it are the copyright of the Queen's Printer and Controller of HMSO, and are licensed under the terms of the Open Government Licence [<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3>]

For further information please contact:

Dan Bristow

Public Policy Institute for Wales

Tel: 029 2087 5345

Email: info@ppiw.org.uk

Contents

Summary	2
Introduction.....	3
The Impact of Bus Deregulation	3
The Welsh Government's Approach	8
Alternative Approaches	11
Effective Quality Partnerships	15
Conclusions.....	17
References	19

Summary

- The bus industry in Wales is characterised by declining demand, relatively high subsidies and low levels of user satisfaction. In its current form the industry is unlikely to deliver a high quality, integrated public transport or to be able to contribute fully to the development of the Welsh economy.
- The overall impact of deregulation has been negative. Fares have increased whilst operator costs have gone down. Wales pays higher subsidies than the rest of Great Britain outside of London without any noticeable added benefit, and the lack of competition in some areas makes it likely that some subsidy leaks into operator profits.
- The wider application of quality partnerships/contracts could increase service quality and demand for the same level of subsidy (or possibly less). It may also help to prevent leakage. However, quality contracts would be likely to face intense opposition from operators. There would be significant transitional and boundary problems and contracts would need to be rolled out over a period of years to permit a dispersed pattern of procurement and subsequent renewals.
- A Statutory Quality Partnership approach could lead to improvements but it would be difficult to deliver the priority measures that bus transport needs in order to compete effectively with car use. The greatest gains would be expected in urban areas and on inter-urban routes. For rural areas, flexible public transport services, integrated with the transport service provision for education, healthcare and social services, could be beneficial.
- Operators have an incentive to participate in quality partnerships because improved quality tends to increase profitability. But the incentives for local authorities to participate are much weaker. Profit sharing with operators might make schemes more attractive for councils but will be difficult to implement because of information asymmetries.

Introduction

The Minister for Economy, Science and Technology commissioned the Public Policy Institute for Wales to provide an independent expert analysis of the regulation and financing of bus services in Wales. The Minister asked for independent advice on four key issues:

1. What has been the impact of deregulation on bus services in Wales?
2. What are the advantages and disadvantages of the Welsh Government's current approach to working with bus operators?
3. What alternative approaches could be considered and what impact would they have on services and the pattern of subsidy?
4. What can the Welsh Government do to improve the effectiveness of quality partnerships?

The analysis in this report is based on a review of policy documents and the relevant academic and non-academic literature plus economic modelling of comparative performance of the Welsh bus market since deregulation¹.

The Impact of Bus Deregulation

The 1985 Transport Act

The current approach to regulating bus services in Wales dates back nearly thirty years to the 1985 Transport Act which:

- Abolished the system of Road Service Licences that had existed since 1930, opening up the commercial market to any company that had appropriate operator, driver and vehicle licenses and registered its services in a manner proscribed by the Traffic Commissioner;
- Made provision for tendering of socially necessary services²; and

¹ The database for the economic modelling was developed with assistance of Dr Jinan Piao.

² Wales has a higher than average proportion of socially necessary services. By 2007/8, they comprised 34% of its services, compared to around 20% in the rest of Great Britain. Due to funding constraints the figure currently stands at around 28%.

- Led to the corporatisation and subsequent privatisation of publicly owned bus companies, including National Bus Company (NBC) subsidiaries owned by central Government and the Municipals owned by local government.

In Wales, the Act resulted in the privatisation of the three NBC subsidiaries and most Municipals. South Wales Transport, covering south west Wales, was acquired by the predecessor of First Group in 1987. National Welsh, covering south east Wales, was also privatised in 1987. Crosville Cymru, in north and mid Wales, was bought by the predecessor to the Arriva Group in 1989. Most Municipals were privatised including Cynon Valley (1992), Inter Valley (1989), Islwyn (2010) and Taff Ely (1988). Only two (in Cardiff and Newport) now remain in public ownership.

The Welsh bus market since deregulation

Our analysis highlights five key trends in the bus market in Wales since deregulation³:

1. **Demand has decreased** - The number of bus trips per head has declined by 39% (33% after allowing for population growth). Ridership increases in the early years of deregulation were followed by a strong secular decline, though it should be noted that the average trip length in Wales is longer than the Great Britain average (estimated at 10 km by the Ministerial Advisory Group (2009) compared to 6km for rest of Great Britain) and the drop off in demand lessened from 2002 onwards.
2. **Supply has increased** - Vehicle kilometres have increased by 22%. The greatest increases were seen in the early years of deregulation, when a number of minibus services were introduced. The rate of growth was less marked from the mid-1990s.
3. **Fares have risen** - Receipts per bus trip, including concessionary fare reimbursements, have increased by 33% in real terms.
4. **Operating costs have fallen** - Costs per vehicle kilometre, including depreciation, have decreased by 19%. The large reductions in costs took place prior to 2000 when they amounted to around 50%.
5. **Subsidy has increased** - Excluding Fuel Duty Rebate/Bus Services Operators Grant, subsidy has increased by 117% in real terms⁴. However, the overall figure masks

³ Unless otherwise stated this analysis covers 1985/6 (the year before deregulation) to 2012/13 (the latest year for which data are available)

⁴ Up to 2010/11 which is the last year for which published data are currently available

important differences between revenue support (down 7%) and concessionary fares reimbursement (up 363%)⁵.

Modelling the impact of deregulation

To determine whether these changes in bus services in Wales are the result of deregulation it is necessary to try to assess what would have happened if the reforms had not been introduced (the 'counterfactual'). Using an approach developed by Preston and Almutairi (2013) based on bus demand forecasting models, we assessed the extent to which demand for services is influenced by fare levels, services and income levels. We then estimated three kinds of benefits: consumer surplus (benefits to bus users); producer surplus (benefits to bus operators); and changes in welfare (the sum of the consumer and producer surpluses). We analysed the data for London and for the rest of Great Britain⁶ and compared these to the Welsh bus market.

Outside of London – The analysis suggests that outside of London bus demand is inelastic to fares and services but is sensitive to income levels⁷. The model estimated that, other things being equal, deregulation had reduced demand by 4.7% in the short run and 12.2% in the long run. Deregulation did not benefit consumers and overall it was strongly welfare negative (though the extent of this depends on the assumptions that are made about the counterfactual) – see Table 1⁸.

London - The bus market in London is more sensitive to fares and services than elsewhere in Great Britain (reflecting competition from rail) but it is less elastic with respect to income⁹. Adjustments to deregulation are more rapid in London than the rest of Great Britain, with

⁵ A national free concessionary scheme was introduced in Wales in April 2002. Expressed in terms of out-turn prices, reimbursement jumped from £14 million (2001/2) to £30 million (2002/3) in one year, but has since increased steadily to £67 million by 2010/11. Estimated to be £73.2 million in 2013/14. Recent agreements have set this to be £67.75 million in 2014/15 and £69.75 million in 2015/16 (Local Transport Today, 651, 11-24 July, 2014, p3).

⁶ Comparisons with London are interesting because its bus services were governed by the 1984 London Regional Transport Act which led to a different approach to deregulation involving the gradual introduction of comprehensive competitive tendering on a route by route basis over a ten year period.

⁷ Outside London, the fares elasticity was estimated at -0.12 in the short run and -0.34 in the long run (which means that if fares were increased by 10% demand would fall by 1.2% in the short run (in that year) and by 3.4% in long run (around 10 years in this instance)), with 99% of change estimated to take place within 10 years. Service elasticity was estimated at 0.13 in the short run and 0.36 in the long run, whilst income elasticity was found to be -0.63 in the short run and -1.70 in the long run.

⁸ The results shown in Table 1 refer to the period 1985/6 to 2009/10 and include the impact of subsidy changes. In order to keep the analysis straightforward, it is assumed that external effects (e.g. on the environment) are negligible and that subsidies can be raised with cost. In reality, one might expect that the shadow price of public funds is around 1.2 (Dodgson and Topham, 1987). In such cases, a subsidy of £100 million, although being a transfer between Government and operators, would also impose a deadweight loss on society of £20 million.

⁹ Fares elasticity was found to be -0.43 in the short run and -0.93 in the long run. Service elasticity was 0.32 in the short run and 0.68 in the long run, whilst the corresponding figures for income elasticity are -0.45 and -0.96.

99% of change occurring in around seven years. Privatisation of London Buses Limited in the early 1990s reduced demand by 6.2% in the short run and 12.8% in the long run. There was a secular time trend of 2.0% growth per annum – substantially higher than in the rest of the country, where the growth trend was 1.1% per annum. The model suggests that deregulation in London benefits both users and operators.¹⁰

Table 1: Welfare Results of Regulatory Reforms Under Different Counterfactual Assumptions (£ Million, 1985/6 to 2009/10, 2008/9 prices)

	London		Outside London	
	Constant	Trend	Constant	Trend
Change in Consumer Surplus	+399	+451	-24,044	-16,299
Change in Producer Surplus	+3,516	+2,676	+11,778	+12,630
Change in Welfare	+3,915	+3,127	-12,266	-3,669

Note: the constant assumption assumes that the situation in 1985/6 is maintained in perpetuity – in other words the year before deregulation is taken as the baseline. The trend assumption assumes that historic trends in terms of subsidy (increasing), costs (increasing) and demand (declining) are maintained.

Wales – The analysis indicates that the Welsh bus market is similar to that which operates in the rest of Great Britain outside of London. In the period immediately after deregulation there was a small net benefit to society¹¹. However, since the early 1990s there were persistent net dis-benefits to society except for a brief period from 2000 to 2002 after which concessionary fares were introduced (Figure 1). This reflects a lack of competition in parts of the market. The bus industry in Wales was relatively concentrated prior to deregulation. In the late 1980s there was competition between the NBC, Municipal and independent sectors. However, this reduced over time, partly due to a series of bankruptcies, though there have been sporadic examples of competition since then, most notably between Cardiff Buses and the 2Travel Group in 2004.

¹⁰ There is a high degree of confidence in the findings because the results are not affected greatly by the assumptions which are made about the counterfactual.

¹¹ Based on present values using a test discount rate of 3.5% and 2012/13 prices.

Expressed in 2008/9 prices in order to be consistent with Table 1, the loss of consumer surplus in Wales up to 2009/10 is estimated at £629 million (which represents 2.6% of the outside London total). The increase in producer surplus is estimated at £9 million. Overall the welfare loss in Wales is computed as £620 million (5.1% of the outside London total). With a population of 3.0 million, Wales has 5.7% of the Great Britain population outside London (52.2 million).

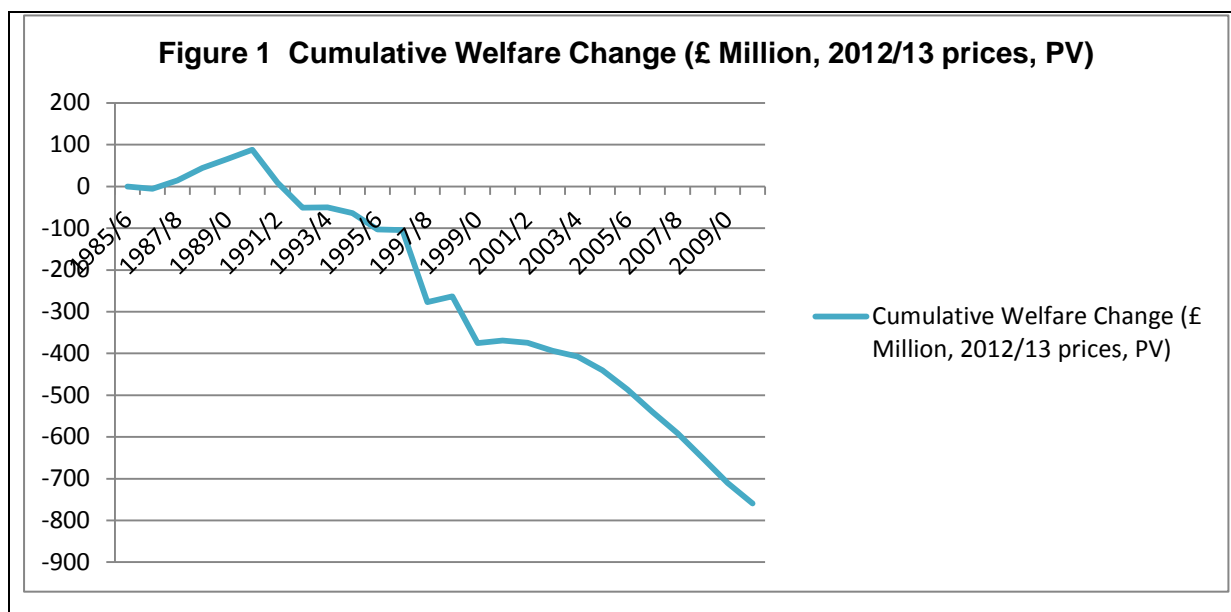


Table 2 summarises the differences between the performance of the bus market in London, the rest of Great Britain and in Wales. It shows that in London bus demand and supply have increased, whilst real operating costs have decreased. There have been substantial increases in real fares and subsidy levels and overall the population is better off by almost £600 per person. By contrast, outside London supply has increased, real operating costs have decreased and demand has declined. There have been substantial increases in real fares and, in Wales, in subsidy. Outside of London, the tax payer is worse off by an average of more than £200 per head.

We estimate that in 2008/9 the mean subsidy (concessionary fares and revenue support) per capita in Wales was around £34 (in 2012/13 prices) compared to £29 in the rest of Great Britain. In London it was around £131. The number of annual local bus trips per capita in Wales (41.6) was some 30% lower than Great Britain outside London (59.3) meaning that the subsidy per bus trip was 67% higher in Wales.

Table 2: The Impacts of Bus Deregulation (1985/6 to 2009/10)

	Change in Passenger numbers	Bus Km	Fares	Operating Costs	Subsidy	Welfare Change per Capita (£) (2012/13 prices)
London	+95%	+82%	+28%	-28% (2008/9)	+84% (2008/9)	+£585
Outside London	-35%	+18%	+47%	-16%	+5% (2008/9)	-£268
Wales	-29%	+32%	+35%	-22%	+123% (2008/9)	-£233

The data suggest that the overall impact of deregulation in Wales has been negative, though slightly less so than in the rest of Great Britain outside London due, in part, to higher levels of subsidisation. Bus user satisfaction appears to be lower in Wales. Surveys in November/December 2010 indicated an overall satisfaction score of 81% in Wales (Statistics for Wales, 2011). By contrast, comparable surveys in England in November 2009 indicated satisfaction levels ranging from 84% (Greater Manchester) to 92% (Brighton) (Passengerfocus, 2010).

The Welsh Government's Approach

Ministerial statements and actions indicate a desire to ensure concessionary fare reimbursement rates represent value for money and that subsidy does not leak into operator profits. Economic modelling comparing the existing arrangements in Wales with a perfectly planned market confirms that this is a problem. It estimates that a significant element of subsidy (£22 million – or around 18%) is captured as supernormal profit in the base situation (over and above an assumed 5% 'normal' return on expenditure)¹² – see Table 3. The

¹² The analysis is based on a negative exponential model of bus demand with a fare elasticity of -0.34 and a service elasticity of 0.36, so as to be consistent with the rest of Great Britain model described earlier. The model form assumes (absolute) fare elasticities increase proportionally with fares, service elasticities decrease proportionally with service levels and that consumer surplus is directly proportional to demand. It should also be noted that this simple model does not take into account competition from other modes. In Wales local rail fares are often lower than competing bus fares. The presence of competing rail services can exert downwards pressure on bus fares – this is believed to be a factor in the Cardiff area. Table 3 includes consideration of Bus Service Operators Grant so that total subsidy is estimated in the base at £125 million.

analysis suggests that the bus industry in Wales is making a return on expenditure of around 18%.

Table 3: Welfare Assessment of the Bus Industry in Wales (2010/11 data)

	Receipts (Pence/ Passenger km)	Vehicle Kms (Million)	Passenger Kms (Million)	Welfare (£ Million)	Excess¹³ Profit (£ Million)
Base	13.0	123	1230	492	22
Welfare Maximisation at Subsidy Constraint	4.9 (-62%)	130 (+8%)	1550 (+26%)	592 (+20%)	0 (-100%)
Profit Maximisation	38.2 (+194%)	74 (-40%)	501 (-59%)	105 (-79%)	77 (+250%)

What constitutes an excess profit and how it should be measured has been hotly debated by experts and by the industry (White, 2001, Competition Commission, 2011). But it seems likely that operators in Wales are earning monopoly rents and were the Welsh Government to eliminate supernormal profits and pursue an objective of maximising welfare there would be clear benefits – mainly in the form of fare reductions but also some service increases.

We estimate that a perfectly planned system would involve an increase in demand of around 25% and an increase in welfare of 20%. By contrast, if subsidies were withdrawn, leaving the market to be supplied by profit maximising local monopolists, fares could increase by approximately 300% and services could reduce by 40%. There would be large increases in profits and large reductions in welfare (down around 80%). These estimates are indicative rather than definitive but are broadly consistent with the findings of the Competition Commission (op cit.) which estimated that the bus industry outside London was earning monopoly rents in the order of £150 to £300 million per annum. Our data suggest that Wales might account for between 7.5% and 15% of this.

Economic analysis can also be used to assess the impact of changes in reimbursement rates. A shift from 73.59% to 64% is equivalent to moving from an arc fares elasticity of around -0.36¹⁴ to one of around -0.56 (or -0.47 if the rate is 68%). There are problems of comparability but the 64% reimbursement rate is not inconsistent with the overview of fares

¹³ Over and above an assumed 5% 'normal' return on expenditure

¹⁴ If fares are made free (i.e. reduced by 100%), a reimbursement rate of 73.59% assumes demand grows by around 36% ($((1/0.7359) - 1) \times 100\%$). The elasticity is thus -0.36 (36/-100).

elasticities produced for the DfT by ITS (2010) and illustrated by Table 4. However, the implied (absolute) elasticity for the reimbursement rate of 68% may be at the lowest end of the plausible range, whilst the implied elasticity at the reimbursement rate of 73.59% is clearly out of range and likely to have been generous to operators. This suggests that the Welsh Government could adjust the reimbursement rate without unduly affecting usage; but there would be value in undertaking work to determine the most appropriate fares elasticity for the Welsh bus market.

Table 4: Overview of Fares Elasticities

	Central estimate	Reasonable range
Metropolitan	-0.5	-0.45 to -0.55
Other Urban	-0.5	-0.45 to -0.55
Rural	-0.65	-0.6 to -0.7

Source: ITS, 2010.

By 2011/12, Concessionary Fare Reimbursement in Wales had reached £70 million, with 650,000 passes in circulation representing an 85% take-up. Some 50 million concessionary bus journeys were being made in Wales in 2011 – 40% of the total (Ministerial Statement, 17 January 2013). Concessionary fares schemes of this type may represent good politics (as there is a clear constituency of gainers) but bad policy. Studies in Scotland have indicated that usage of schemes is greatest amongst the relatively young and wealthy elderly (Rye & Scotney, 2004). They have been shown to generate a large proportion of new trips (Baker & White, 2010) rather than a substantial modal transfer from car use. However, concessionary fares can be beneficial in terms of social inclusion and KPMG (2014) suggests that concessionary bus fares may have social benefits, in part, through promoting volunteering as well as increased physical activity. It suggests that for every £1 spent on concessionary fares, there may be £2.87 of social benefits. Nonetheless, we would suggest that there may be scope for more targeted use of subsidy (for example, by means testing or some form of minimum charge) that would provide better returns. Other groups might also be offered discounts at a national scale, most notably young adults. Alternatively (or additionally), a National Travelcard system, like that operated in Switzerland, could be developed as a way of offering discounts to frequent travellers. ITSO compliant Smartcards offer an appropriate technological platform, with large scope for added value services.

Alternative Approaches

International evidence offers a range of alternative ways of organising the bus market, many of which have been examined in detail by the International Conferences in Competition and Ownership in Land Passenger Transport.¹⁵ These include:

- Comprehensive tendering at a route level (as happens in Copenhagen or London) or by area (as is the case in Adelaide);
- Network management contracts (as widely practiced in France);
- Performance based contracts (such as the Public Transport Operations Model recently introduced in New Zealand);
- Statutory and Voluntary Quality Partnerships, including those using the Qualifying Agreements provisions of the 2008 Local Transport Act and the Office of Fair Trading Block Exemptions (as in Oxford);
- Quality Networks (as used, for example, in St Albans);
- Flexible Transport Services; and
- Community Bus Partnerships (as trialled in South Yorkshire and Leicestershire)¹⁶.

We suggest that two of these - Statutory Quality Partnerships (SQPs) and Flexible Transport Services (FTS) – are particularly worth exploring because they are the options for which the most empirical British evidence is available and they also illustrate generic solutions for urban and rural bus markets respectively.

Quality Partnerships

SQPs were introduced by the 2000 Transport Act to overcome some of the shortcomings of Voluntary Quality Partnerships, in particular the free rider problem whereby a low quality operator could benefit, at low cost, from investments in a high quality network (Whelan et al., 2001). Davison and Knowles (2006) and Wall and McDonald (2007) provide reviews of Voluntary Quality Partnerships, whilst their evolution towards SQPs has been reviewed by Rye and Wretstrand (2013). Initial take-up was slow, with only Dundee and Sheffield

¹⁵ See: <http://www.thredbo-conference-series.org/>

¹⁶ These build on the success of Community Rail Partnerships in increasing demand for rural public transport through the voluntary sector 'sponsoring' routes and providing marketing and information, maintenance of bus stops and shelters etc. (Local Transport Today, 646, May 2014). Such partnerships could evolve into micro-franchising arrangements

introducing SQPs in the first phase. In part, this was due to operator concerns about falling foul of the 1998 Competition Act. Some of these issues were addressed by the 2008 Local Transport Act which stimulated a second phase of SQPs in Barnsley, Bristol, Greater Manchester, Merseyside, Nottingham and the West Midlands. Some of the results of this second phase are summarised in Table 5 which shows that these SQPs have led to modest patronage growth (often against a background of falling demand) and, being commercial services, have not led to major increases in subsidy. Although there may have been some increases in concessionary fare support, this is likely to have been offset by reduced requirements for revenue support for subsidised services. In essence, SQPs have permitted an evolution of services in a few markets but have not led to revolutionary change. We will discuss some of the reasons later in this report.

Table 5: Results of Second Phase of SQPs

	SQPS1	SQPS2	SQPS3	SQPS4
Results	6% year on year increase in patronage and reliability Improved vehicle quality	Cut journey times Improved vehicle quality Improved network	1% increase in passengers in first year (decline previously) Improved vehicle quality	17% increase in main operator's passengers over 4 years
Problems	Initial opposition from operator Operator forced to run sub-standard buses at one point	Lack of political buy-in Still some duplicative competition	Legal process lengthy – needed even for minor changes to scheme	Initial opposition from operator Few resources to monitor
Benefits as expected?	Largely; also stopped politicians removing bus priority	Yes	Significantly more – levered in extra investment and service	Largely as expected
More planned?	No – seen as one-off infrastructure investment Future seen as VPAs	No; this SQP is to deal with a very specific problem location	Yes, at least seven in metropolitan area	Yes, at least three more routes

Source: Rye and Wretstrand, 2013.

Flexible Transport Services

Quality Partnerships are largely, but not exclusively, an urban phenomenon. For rural services, Flexible Transport Services (FTS) have often been suggested as an alternative to conventional bus services. They are flexible in that they can provide a door to door service, may be booked in advance (by telephone or, increasingly, by the internet), and utilise a range of vehicles (including those primarily used for education, health care and social services). They also use volunteer drivers. However, of nine schemes in Scotland reviewed

by Velaga et al. (2012), three have ceased operating, and the longest lived have relied on strong government support.

A key issue with FTS is whether they provide value for money. There are two broad types of assessment: needs based and welfare based approaches. A needs based approach typically measures need in terms of accessibility to key facilities and a cost effectiveness measure of the cost of support per unit of accessibility is determined. An example, based on Havant is shown by Table 6. The council favoured an average measure, in which case option 4 is chosen with a cost of £5,110 per accessibility point. An alternative approach would be to use a marginal measure, in which case option 2 is chosen, as a gain of 1% in accessibility is achieved at a cost saving of £27,000 – a Pareto improvement on the base situation. An important issue here is the extent to which the commercial network provides a base level of accessibility and hence the extent to which tendered services enhance accessibility.

Table 6: Needs Based Approach

Option	Cost (C) (£k pa)	Accessibility Score (A) (%)	Cost change relative to base	Accessibility Score relative to base	Cost divided by Accessibility Score (C/A)	Cost saving divided by Accessibility Score change
Base	520	86	-	-	6.05	-
1	500	88	-20	+2	5.68	+10
2	493	87	-27	+1	5.66	+27
3	442	85	-78	-1	5.20	-78
4	430	84	-90	-2	5.11	-45
5	579	90	+59	+4	6.43	-14.75

Source: HCC, 2007.

The alternative is a welfare based approach in which the cost of support per passenger is compared with benefits achieved. In practice, this may manifest itself in a maximum subsidy payment per passenger but with little attention paid to the possible benefits of different services. However, work undertaken by Oxfordshire County Council in 2002, indicates that few FTS services would be under the maximum subsidy per passenger threshold that was in

use at the time (£3.50), although conventional services can operate with subsidy rates below this level (Table 7).

In 2010/11, the mean receipts per passenger in Wales (including concessionary fares reimbursement) were £1.38. However the mean concessionary fare reimbursement was estimated at £0.62 per passenger (or £1.44 per concession). Similarly, the mean cash fare was £0.76 per passenger (or £1.33 per fare paying passenger). This suggests that the mean trip length per concessionary journey is slightly longer than that per fare paying journey. Overall, mean subsidy per passenger in Wales (excluding BSOG) was estimated at £0.88, well below the suggested threshold given above.

Table 7: Welfare Based Approach

Scheme	Vehicle type	Vehicle access	Route Flexibility	Journey Timing	Passenger Fare per single journey	Annual Usage (000)	Subsidy per passenger (£)
A	Minibus	Low Floor	Fixed	Every three hours, 6 days per week	25p	11.9	4.70
B	Minibus	Low Floor	Fully demand responsive	Hourly, 6 days a week	50p	48.1	5.10
C	Mini and Midi Bus	Low Floor	Fixed with deviation and demand responsive	Hourly, 6 days a week	71p	37.7	9.90
D	Midi Bus	Low Floor	Mainly demand responsive	4 times per day, 6 days per week	71p	5.5	10.70
E	Midi Bus	Low Floor	Mainly fixed	4 times per day, 6 days per week	92p	3.0	17.00
F	Taxi	High Floor	Fully demand responsive	6 times per day, 7 days per week	150p	1.9	9.70
G	Midi Bus	Low Floor	Fixed with deviations	Hourly, 6 days per week	60p	23.4	4.60
H	Single Deck	High Floor	Fixed	Hourly, 6 days per week	112p	65.7	0.67
I	Single Deck	High Floor	Fixed	Hourly, Mon – Sat daytime, less frequent in evening & Sunday	119p	323.3	0.55

Source: OCC, 2002.

Effective Quality Partnerships

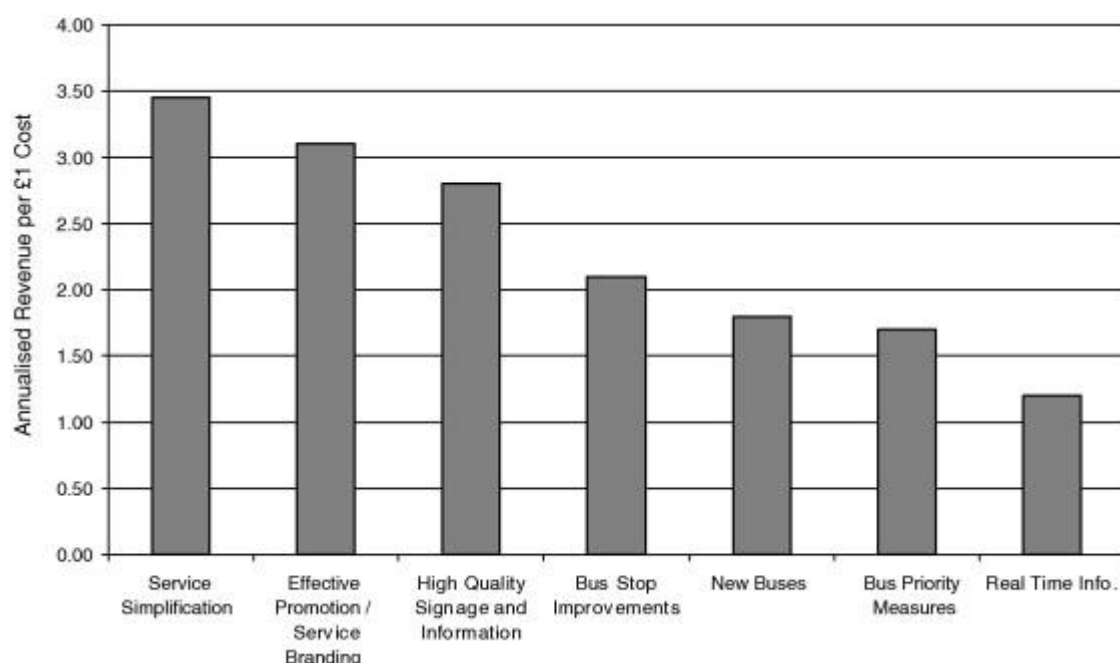
Economic modelling indicates that quality partnerships can increase benefits to society and enhance the profitability of operators (Preston, 2004, 2008). However, where an operator has a local monopoly they will be incentivised to charge higher fares and provide lower service frequencies than the optimal (Glaister, 2001), as appears to be the case in Wales. Where competition does occur, it will tend to be small group in nature, resulting in too much service, paid for by too high fares (Evans, 1987).

Local authorities are unable to set limits on commercial fares or regulate commercial service frequencies, as this would 'inhibit competition' contrary to the 1985 Transport Act, whilst operators were not able to fix fares and service levels, as this was contrary to the 1998 Competition Act. The 2008 Local Transport Act removed some of these constraints. The , best example is Oxford where joint ticketing arrangements have been introduced, timetables co-ordinated, new larger buses introduced and service levels in the City Centre have reduced by 14%, whilst patronage has continued to increase. However, Oxford is unique in that there were two equally sized and resourced operators in the City (Go-Ahead Group and Stagecoach) for whom collaboration was clearly preferable to continued competition. It does not seem that there are similar examples in Wales.

Thus quality partnerships can deliver improved quality but not necessarily accompanied by improved prices or by improved service quantity. There is, though, a further problem. A key improvement in quality relates to bus priority and the resultant increases in bus speeds. Where priority is provided through new road infrastructure, this has a high capital cost, which falls on the local authority. Where priority is provided by reallocation of road space away from motorists, this has a lower capital cost but can have a high political cost as a result of the disaffected motorists that may be created. Understandably, councils will be reluctant to bear these costs, particularly when much of the benefit will accrue in increased profits to the operators. Profit sharing arrangements could overcome some of these problems but information asymmetries would make such arrangements very difficult to formulate. The group structure of the largest bus operators, along with the large proportion of common costs and revenues, make it very difficult to calculate the profitability of an individual route.

TAS (2002) have illustrated a range of value for money fixes that can improve bus services (see Figure 2).

Figure 2: Bus Service Improvements

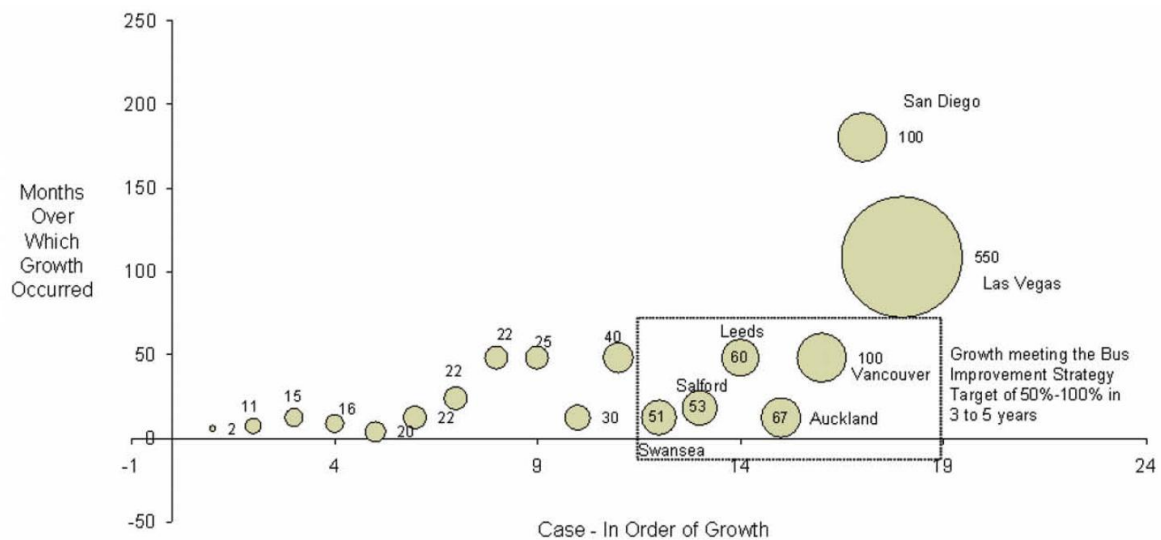


Source: TAS (2002) in Currie and Wallis (2008).

Quality partnerships between operators and local authorities can relatively easily deliver services simplifications, promotions, branding, high quality signage, information and bus stop improvements. However, the more capital-intensive investments such as new buses and, particularly, bus priority measures are more problematic. Nonetheless, Dong and Nelson (2012) have shown that bus rapid transit has been successful worldwide in growing the market. This point is reinforced by the work of Chatterjee (2011) who has illustrated how the Crawley – Horley bus rapid transit system has led to a sustained increase in bus use. Currie and Wallis (2008) have also shown how systems that have had the greatest growth have done so with the use of priority. This is illustrated by Figure 3, where one of the exemplars is the frt scheme in Swansea. Both the North East Wales and the South East Wales Transport Task Forces have highlighted the importance of bus rapid transit to fill a gap between conventional rail and bus services, highlighting routes such as the Pontypridd to Pontypool mid valleys link. Work by KPMG for Greener Journeys has established that bus priority schemes can represent good value for money, with a typical Benefit Cost Ratio of around 3.3 when wider economic impacts (including access to jobs) are taken into account¹⁷. This is broadly double the return found by TAS in Figure 2.

¹⁷ <http://www.greenerjourneys.com/2014/07/buses-drive-jobs-economic-prosperity-reveals-landmark-report/>

Figure 3: Bus Improvement Schemes (% Bus Market Growth and Time Period Over Which Growth Took Place)



Source: Currie and Wallis (2008)

Work on monitoring the Better Bus Area Fund has shown that quality improvements such as real time information, wifi, next stop indicators and low floor buses are becoming the expectation (Song et al., 2014). Although they will shore up existing usage, they are unlikely to attract new users. Harder measures may be required such as journey time savings, reliability improvements, service frequency enhancements and fare reductions.

Conclusions

The current bus industry structure in Wales is characterised by declining demand, relatively high levels of subsidy and low levels of bus user satisfaction. This is unlikely to deliver the high quality, integrated public transport to which the Welsh Government aspires.

A Statutory Quality Partnership approach could produce some improvements but there would be difficulties delivering the priority measures that bus transport needs in order to compete effectively with car use.

A nationwide devolved Quality Contract for local buses in Wales would have a number of advantages. This approach has succeeded in London, although the market there is very different to that in Wales. It would be consistent with the approach for rail, and would allow bus-rail integration. It would be capable of delivering the networks to which the North East and South East Wales Transport Task Forces aspire.

However, there are also a number of barriers to overcome. The 2000 Transport Act and 2008 Local Transport Act gave local authorities the powers to introduce Quality Contracts but to date none have done so. Furthermore, the Welsh Government does not have these powers (and would require primary legislation to have them) but it does have co-ordination powers, although co-ordinating all 22 Unitary Authorities to deliver Quality Contracts would be difficult. Furthermore, compared to Transport for London or the Passenger Transport Executives, Wales has little institutional capacity to design and procure quality contracts. However, this tactical level planning could be contracted out to consulting firms such as AECOM and Arup who are partly performing this type of planning role for the Transport Task Forces.

Quality contracts would face intense opposition from operators, who might move to more entrenched profit maximising strategies. Alternatively, in such circumstances operators might take a more permissible stance on quality partnerships. Transitional and boundary problems for a nationwide scheme would be significant, with contracts needing to be rolled out over a period of a few years, so as to permit a dispersed pattern of procurement and subsequent renewals. There would also be issues in terms of determining the nature of the contracts themselves. Following London, this would probably be best delivered as relatively short (three years) contracts at a route level, but with block bids permitted. This could encourage the development of Welsh based SMEs.

There should probably be gross cost contracts with Government taking the revenue risk but with operators incentivised through a performance management regime to ensure reliable, punctual and high quality services, as in London. Timetables and fare levels and structures would be specified by the Welsh Government following consultation with all relevant stakeholders. Bidders would be required to provide vehicles and depots. The risk to the Government would be minimised by the rolling nature of the procurement programme, whilst it would simplify arrangements for concessionary fare reimbursement, as the Government in essence would be reimbursing itself. Such a system would be able to increase bus patronage by up to 25% with existing subsidy levels and existing levels of quality. Where quality can also be increased, for example through greater provision of bus priority, then greater increases in demand would be possible, although this would require capital investments. Only by a radical reform of this sort will the Welsh bus industry be revived and contribute fully to the development of the Welsh economy.

References

- Baker, S. and White, P. (2010) **Impacts of free concessionary travel: case study of an English rural region.** *Transport Policy*, 17, 1, 20-26.
- Chatterjee, K. (2011) **Modelling the dynamics of bus use in a changing travel environment using panel data.** *Transportation*, 38, 487-509.
- Competition Commission (2011) **Local Bus Services Market Investigation. Provisional Findings Report.** Competition Commission, London. May. http://www.competition-commission.org.uk/inquiries/ref2010/localbus/pdf/local_uses_provisional_findings_report.pdf
- Currie, G. and Wallis, I. (2008) **Effective ways to grow urban bus markets – a synthesis of evidence.** *Journal of Transport Geography*, 16, 6, 419-429.
- Davison, L.J. and Knowles, R.D (2006) **Bus quality partnerships, modal shift and traffic decongestion.** *Journal of Transport Geography*, 14, 3, 177-194.
- Deng, T. and Nelson, J. (2011) **Recent Developments in Bus Rapid Transit: A Review of the Literature.** *Transport Reviews*, 31, 1, 69-96.
- Dodgson, J.S and Topham, N. (1987) **Shadow Price of Public Funds: A Survey.** In **Glaister, S.** (Ed) *Transport Subsidy.* Policy Journals, Newbury.
- Evans, A. (1987) **A Theoretical Comparison of Competition with Other Economic Regimes.** *Journal of Transport Economics and Policy*, 21, 7-36.
- Glaister, S. (2001) **The Economic Assessment of Local Transport Subsidies in Large Cities.** In Grayling, T. (Ed) *Any More Fares?* IPPR, London.
- Hampshire County Council (HCC) (2007) **Review of Transport in the Community.** HCC, Winchester.
- Institute for Transport Studies (2010) **Concessionary Fares Synergy Paper.** Mimeo, University of Leeds.
- KPMG (2014) **The Costs and Benefits of Concessionary Bus Travel for Older and Disabled Persons in Britain.** Report for Greener Journeys, London.
<http://www.greenerjourneys.com/wp-content/uploads/2014/09/Concessionary-travel-costs-and-benefits-September-2014.pdf>
- Ministerial Advisory Group (MAG) (2009) **Phase 2 Report on Transport.** 11/12 December. Cardiff.

Oxfordshire County Council (OCC) (2002) **Best Practice Guides: Rural Bus Service**.
OCC, Oxford.

Passengerfocus (2010) **Bus Passenger Survey. July**.

<http://www.passengerfocus.org.uk/research/publications/bus-passenger-survey-full-report-july-2010>

Preston, J. and Almutairi, T. (2014) **Evaluating the Long Term Impacts of Transport Policy: The Case of Bus Deregulation Revisited**. 13th International Conference on Competition and Ownership in Land Passenger Transport. Forthcoming in Research in Transportation Economics.

Preston, J. (2004) **The Deregulation and Privatisation of Public Transport: Twenty Years On**. Transport Research Foundation (TRF) Lecture. Oxford.

Preston, J. (2005) **Tendering of Services**. In Button, K. and Hensher, D. (Eds) Handbook of Transport Strategy, Policy and Institutions. Elsevier, Oxford. 65-82.

Preston, J. (2008) **Competition in Transit Markets**. *Research in Transportation Economics*. 23, 75-84.

Rye, T. and Scotney, D. (2004) **The Factors Influencing Future Concessionary Bus Patronage in Scotland and their Implications for Elsewhere**. *Transport Policy*, 11, 133-140.

Rye, T. and Wretsand, A. (2013) **Converging Structures? Recent regulatory change in bus-based public transport in Sweden and England**. 13th International Conference on Competition and Ownership in Land Passenger Transport, Oxford.

Song, Y., Preston, J. and Hickford, A. (2014) **Delivering Sustainable Public Transport: The Case of the Better Bus Area Fund**. *Research in Transportation Economics*.
Forthcoming.

Statistics for Wales (2011) **Welsh Bus Passenger Survey 2010**. Statistical Bulletin 65/2011. <http://wales.gov.uk/statistics-and-research/welsh-bus-passenger-survey/?lang=en>

TAS Partnership (2002). Appendix C: **United Kingdom Experience in Bus Service Improvements**. In Booz Allen Hamilton. Metropolitan Bus Plan: Cost Effective Improvement Measures. Department of Infrastructure, Victoria, Australia.

Velaga, N.R., Nelson, J.D., Wright, S.D. and Farrington, J.H. (2012) **The Potential Role of Flexible Transport Services in Enhancing Rural Public Transport Service Provision**. *Journal of Public Transportation*, 15, 1, 111-131.



Wall, G. and McDonald, M. (2007) **Improving bus service quality and information in Winchester**. *Transport Policy*, 14, 2, 165-179.

Whelan, G.A., Toner, J.P., Mackie, P.J. and Preston, J.M. (2001) **Modelling Quality Bus Partnerships**. World Conference on Transport Research, July 22-27, Seoul, Korea.

White, P. (2001) **Local Bus Industry Profitability and the Role of Longer-distance Services**. In Grayling, T. (Ed) *Any More Fares?* IPPR, London.



The Public Policy Institute for Wales

The Public Policy Institute for Wales improves policy making and delivery by commissioning and promoting the use of independent expert analysis and advice. The Institute is independent of government but works closely with policy makers to help develop fresh thinking about how to address strategic challenges and complex policy issues. It:

- Works directly with Welsh Ministers to identify the evidence they need;
- Signposts relevant research and commissions policy experts to provide additional analysis and advice where there are evidence gaps;
- Provides a strong link between What Works Centres and policy makers in Wales; and
- Leads a programme of research on What Works in Tackling Poverty.

For further information please visit our website at www.ppiw.org.uk

The Author

Professor John Preston is Head of Civil, Maritime and Environmental Engineering and Science at the University of Southampton.



This report is licensed under the terms of the Open Government Licence

