

Competitive tendering and deregulation in the British bus market - a comparison of impacts on costs and demand in London and the British Metropolitan Areas

Bryan Matthews, Abigail Bristow and Chris Nash
Institute for Transport Studies
University of Leeds

Paper presented at THREDBO7 2001: Molde, Norway

1. Introduction

Until the early 1980s bus patronage in London, as measured by passenger journeys, was declining in common with the pattern throughout the rest of Great Britain. However, since the early 1980s this pattern of decline has, with the exception of the years 1991/92 to 1993/94 when there was an economic recession, been reversed. Meanwhile, patronage in the other English Metropolitan Areas has continued to decline during the 1980s and 1990s, such that the current level is little more than 60% of that in the mid 1980s. These trends have occurred against the backdrop of a changing regulatory and organisational framework both within London and throughout the rest of Britain.

The contrasting regulatory developments in the British bus market where within London, there is a system of regulated competitive tendering, and, outside London, the market has been deregulated, have provided a number of authors with interesting lines of research. Two of the key themes of this body of research are the impacts of the reforms on costs and subsidy within the industry (Heseltine and Silcock, 1990; Glaister and Beesley, 1991; and Kennedy, 1995) and on demand for bus travel (Mackie and Preston, 1996; and Mackie, 2001).

It is often highlighted that the demand for bus travel has been in long term decline; a decline which began long before the regulatory and organisational reforms of the mid 1980s. The downward trend, used as evidence of this long term decline, can be readily observed on examination of bus travel demand statistics for the 1970s and early 1980s. One hypothesis is that, whilst the reforms outside London failed to halt this long term decline, as bus patronage continued to decline throughout the 1980s and into the 1990's, the reforms in London helped to reverse that long term decline; bus patronage having increased in London, particularly through the mid-late 1990s.

A different version of this story is suggested by some who have constructed econometric models of bus travel demand, such as Fairhurst and Edwards (1996). Using data from the 1970s and early 1980s (prior to the regulatory and organisational reforms), they estimated econometric models to explain bus travel demand. They then used these models to forecast bus travel demand for the years after the regulatory and organisational reforms. They found that these forecasts fitted well with observed bus travel demand in London during the late 1980s and 1990s but did not fit well with observed demand outside of London during this period. Their conclusion was that in London the prior relationships between bus travel demand and population, income, fares etc had been maintained whereas outside of London these relationships had broken down.

This paper reviews and analyses the contrasting developments, drawing on published sources and using aggregate travel and socio-economic data to look at changes in cost and demand factors which have taken place over the past 15-25 years. In particular, trip rates for different socio-economic groups in different areas, based on National Travel Survey (NTS) data from prior to and since the regulatory reforms, are analysed and compared. Consideration is then given to how these factors could be linked to the regulatory reforms that have taken place. The findings are based on work carried out for SCENES, a European FP4 project analysing long run changes in transport demand.

Section two of this paper describes the regulatory changes which took place and draws attention to some of the other important differences between London and the other British Metropolitan Areas which make direct comparisons rather difficult. Section 3 briefly reviews recent aggregate data on the changes in costs and subsidy levels within the industry and section 4 uses socio-economic data from the National Travel survey (NTS) to highlight some of the ways in which demand for bus travel has changed. Section 5 then seeks to draw conclusions.

2. The Different Systems and Cities

2.1 The two systems

Currently, “London is a regulated bus market in which public passenger services are provided by private bus operators under contract to or in agreement with LTB [London Transport Buses], which is part of London Regional Transport” (London Transport Buses, 1999). The form of regulation, contracting and ownership within the London bus market have all evolved over the past 15 years as a consequence of the London Regional Transport Act (1984). The bus market outside of London is also largely privately owned but is, in contrast to London, deregulated.

During the 1970s and early 1980s, bus operations throughout the UK were provided on a fairly uniform basis. Operators, generally publicly owned and subsidised, were licensed to provide defined services with minimal exposure to competition. In the mid 1980s it was decided that bus operations throughout Great Britain should be privatised and deregulated as a means of introducing the disciplines of competitive forces and the private sector into the industry. At approximately the same time, it was decided that, in London, the industry should remain regulated, at least for the time being, but that competitive forces should be introduced via a regime of bus route tendering. The London Regional Transport Act (1984) led to a regime with four key features (LTP 1998).

- I. progressive introduction of competitive tendering
- II. competition for the supply of franchised services
- III. privatisation of London Buses Ltd, and
- IV. the preservation and development of integrated fares, ticketing and service planning

Bus route tendering across London was introduced gradually over the subsequent years, the first contracts being let in the summer of 1985. The then Government's intention was that the bus market would, at some later point in time, be deregulated in line with the rest of Great Britain. Indeed, in 1991 the Government published a consultation document entitled a Bus Strategy for London which set out plans for deregulating buses in London. However, in 1993 these plans were postponed and whilst the Conservative Government did make vague promises that they would deregulate buses in London should they be re-elected at the 1997 general election, they were not re-elected and the Labour government has no plans for further bus deregulation.

Competition for the right to operate particular bus routes in London was, initially between the public sector subsidiary companies of London Buses Ltd (a wholly

owned subsidiary of London Transport created in 1984) and, what was then, an emerging group of private bus operators. In 1994 London Buses Ltd (LBL) itself was privatised, with five of the subsidiaries being purchased by their management/employees, and two each being purchased by Stagecoach and by Cowie (since renamed as Arriva), with no other one organisation purchasing more than one of the remaining companies. As a result, all bus services in London have, since 1994, been operated by the private sector.

By contrast, outside London the 1985 Transport Act led to a situation whereby the majority of services were provided by commercial bus operators who determined fares and services on a purely commercial basis. Market entry is free, except for the need for an operators licence on safety grounds, and there is no integrated planning of services or fares. Most operators were privatised, and those remaining in local authority ownership had to be 'arms length' commercial organisations. Where local authorities did provide subsidy to secure socially necessary services not provided on a commercial basis, it had to be in the basis of competitive tendering.

2.2 Comparing London with the British Metropolitan Areas

London's population, currently 7.12 million, and population density, currently 45 persons per hectare, are considerably greater than those for each of the other metropolitan areas. The area with the next highest population and population density is the West Midlands, but its population is little more than a third of that of London and its population density just less than two thirds that of London. Furthermore, the population of London has grown by 5% since 1981, where as all of the metropolitan areas other than West Yorkshire, whose population grew by 2.1%, experienced a decline in population of between 1% and 7.2%. The number of households and the number of households per hectare in London are considerably greater than those for each of the other metropolitan areas. The area with the next highest numbers of households is Greater Manchester, but it has little more than a third the number of households of London. Between 1981 and 1996, London has experienced the highest growth in number of households - 13.8% - with West Yorkshire, at 12.6%, experiencing the next highest level of growth. London has experienced the smallest decrease in average household size over the period, though the decreases in West Yorkshire and in Greater Manchester are only slightly more marked.

Table 1 shows trends in car ownership per head in London and each of the other six English Metropolitan Areas. It should be noted that the data is not an entirely consistent series due to changes in the method of collection of 'cars registered by keepers address' data and changes in area definitions which occurred in 1992 and in 1996 and which both had the effect of reducing the cars registered by keepers address figures slightly, However, a broad picture does emerge.

Table 1 Car Ownership per 100 population

	London	West Midlands	Grtr Manchester	Merseyside	South Yorkshire	West Yorkshire	Tyne and Wear
1988	33.5	35.6	29.9	24.9	28.8	28.9	23.5
1989	34.3	38.0	32.3	26.0	30.8	30.4	24.6
1990	34.8	39.2	33.5	27.2	32.2	31.4	25.5
1991	34.2	39.7	33.0	27.4	32.4	31.6	25.9
1992	34.2	40.1	33.4	28.1	33.1	32.4	26.5
1993	33.2	39.4	33.4	28.0	32.6	31.7	26.0
1994	33.6	40.3	34.4	28.5	33.3	32.1	26.5
1995	33.2	41.0	35.0	28.7	33.5	32.5	26.9
1996	33.9	42.4	36.7	29.9	34.6	33.5	28.1
1996	33.4	38.2	37.2	30.0	31.8	33.0	27.0
1997	33.1	41.4	39.2	30.9	32.4	33.9	27.4
1998	33.3	41.5	40.3	31.3	33.2	34.4	28.2
% Change (1988-98)	-0.6	16.7	34.8	25.6	15.2	18.8	20.2

Source: Department of the Environment, Transport and the Regions

There has been a small reduction in car ownership per head in London across the period. Even given the caveat noted above, this is quite remarkable, especially when compared to the figures for each of the other metropolitan areas which all increase by between 15.2% to 34.8%, over the period. As at 1996, 39% of households in London do not have a car, 42% of households have one car and 19% of households have more than one car. Whilst the proportion of households with 2 or more cars increased substantially in all areas over the period, the increase in London of 35.7% was, by a considerable extent, the smallest increase in multiple car households of any of the metropolitan areas. The proportion of households with one car has, throughout all areas, remained relatively unchanged, with London and Greater Manchester both experiencing no change; Tyne and Wear experienced the biggest change, experiencing an 8.3% increase. Furthermore, whilst the proportion of households with no car decreased throughout all of the areas, the percentage decrease in London was the lowest decrease of any of the areas, even if marginally so. West Midlands, Merseyside and Tyne and Wear experienced similar scale decreases to that in London.

Table 2 shows average earnings per head data for London and the other six English Metropolitan Areas for selected years since 1987. The disparity between London and the other areas is immediately apparent. Earnings in London began the period approximately 25% higher than earnings in any of the other areas and proceeded to grow at a faster rate than any of the other areas over the following 11 years. Average weekly earnings in London grew by 27.5% over the period, where as average weekly earnings in the west Midlands, the area which experienced the next highest increase, grew by 21.3% over that same period. However, in 1998 average earnings were lower in each of the other English Metropolitan Areas than they were in London 11 years previously.

Table 2 Index of average earnings per head

Year	Greater London	West Midlands	Grtr Manchester	Merseyside	South Yorkshire	West Yorkshire	Tyne and Wear
1987	393	301	303	301	298	294	289
1989	431	318	315	315	318	307	301
1991	441	327	326	323	322	315	314
1993	472	349	344	344	333	335	332
1994	470	351	347	343	331	344	333
1995	480	349	346	348	328	337	327
1996	486	357	351	347	329	342	337
1997	498	359	359	354	337	344	339
1998	501	365	357	360	338	348	342
% change	27.5	21.3	17.8	19.6	13.4	18.4	18.3

Source: Office for National Statistics

In addition, GDP per head in London is approximately 40% higher than the national average, where as GDP per head in the other six English Metropolitan Areas is between 6% and 27% lower than the national average. These ratios remained relatively static over the period for which we have data - 1993-1996.

There is some evidence to suggest that London also differs from the other six English Metropolitan areas with respect to parking availability and cost and with respect to the proportion of visitors within the population. The evidence which exists suggests that parking is less available and, where it is available, more expensive in London than in the other English Metropolitan Areas. This is likely to suppress car-use in London relative to the other Metropolitan areas. The evidence which exists regarding visitors, including students, other temporary residents and tourist visitors, suggests that their proportion within London's population is greater than that in the other English Metropolitan Areas. However, whilst approximately 19 million people visit London each year, estimates suggest that these account for only around 5% of public transport trips, the majority of which are likely to be by underground (White 1997). This, therefore, probably has a relatively small impact on bus travel within London.

Whilst certain areas, such as West Midlands, Greater Manchester and West Yorkshire, stand out as being similar with respect to certain indicators, no single area stands out as being particularly similar to London. Also, even where there are similarities between the statistics, in some cases the reasons behind these similarities may be different for the different areas. For example, it is likely that the low car ownership per head in South Yorkshire is linked to low earnings levels, where as in London this is clearly not the case. Therefore, we have used the six Metropolitan areas as a group as a comparator with London in the following sections.

3. Review of evidence on costs

One of the principal arguments for deregulating the British bus industry outside of London was that the competitive market forces that it brought with it would reduce costs, particularly due to higher productivity and lower wages, by up to 30 percent. In fact, “although the government did express hopes of increased demand and lower fares, ...the prime motivation for the policy was actually to change things on the supply side in order to meet global requirements for subsidy reduction whilst minimizing damage to passengers through fare increases and service reduction” (Glaister, 1991). The apparent effect of deregulation on costs has been considerable, with real cost reductions of around 30%, excluding depreciation, being recorded by the end of the 1980s (Glaister, 1991). In London cost savings in the order of 20% were estimated to have been achieved by the mid 1990s (Kennedy, 1995).

Table 3 shows operating costs per vehicle km for buses in London and in the English Metropolitan Areas over the decade following the regulatory reforms.

Table 3 Bus Operating costs per vehicle km

	London	English Metropolitan
1986/87	£2.62	£1.70
1987/88	£2.47	£1.38
1988/89	£2.44	£1.28
1989/90	£2.29	£1.23
1990/91	£2.18	£1.20
1991/92	£2.10	£1.15
1992/93	£1.96	£1.06
1993/94	£1.80	£1.01
1994/95	£1.61	£0.97
1995/96	£1.49	£0.97
1996/97	£1.59	£0.97
1997/98	£1.52	£0.90
% Change (1987/88-1997/98)	-38.6	-34.6

Source: Department of the Environment, Transport and the Regions

Bus operating costs per vehicle km in London have reduced dramatically over the period shown, reaching a minimum in 1995/96, a year after privatisation of London Buses Ltd. Whilst bus operating costs per vehicle km in the English Metropolitan Areas also reduced dramatically over the period, the proportionate size of this reduction is slightly less than that experienced in London. However, this reduction is more remarkable as it was achieved from a much lower starting point, in 1986/7 costs in the metropolitan areas were 65% of costs in London, by 1997/8 costs had fallen to 59% of costs in London.

Table 4 shows average national wage rates for bus and coach drivers in comparison with average wage rates for all workers. It shows that bus and coach drivers' wage

rates were the same in 1998 as they were in 1980, whilst wage rates for the average of all workers have increased by almost 50% over the same period. In the period since 1986, the first year of bus deregulation in Britain and the second year of bus route tendering in London, bus and coach drivers' wage rates have decreased by 12.5% and have gone from being 83.8% to 58.8% of the average wage rate for all workers.

Table 4: Average National Wage Rates (£/hour; 1998 prices)

	All workers	Bus and coach drivers
1980	6.6	5.6
1986	7.6	6.4
1992	8.9	5.9
1998	9.5	5.6
% Change (1986-1998)	+25%	-12.5%

Source: Department of the Environment, Transport and the Regions

It has been suggested (eg by Glaister, 1991) that the cost reductions can be attributed, in large part, to real weekly and hourly earnings in the industry falling against an increase in other industries, as well as a fall in numbers employed – for example, the number of maintenance and administrative staff has declined by approximately 15% since the mid-1980s. Together with the increases in service level which have taken place over the period, this suggests large productivity gains. It has been suggested that these downward pressures on staff costs have contributed to increased staff turnover, increased difficulties in recruiting bus drivers and poorer levels of driving standards. Nevertheless, the proportion of timetabled services actually operated has, in London at least, increased since tendering and privatisation were introduced (Department for the Environment, Transport and the Regions, 1998).

Alternatively, evidence on cost reductions at an early stage in the process (Heseltine and Silcock, 1990) outside London found that 2/3 of the cost reductions were attributable to improved productivity and the rest to a mix of falling real fuel prices and wage rates and reduced investments. Productivity improvements are thought to be the main source of cost savings in London.

With these cost reductions in mind, Table 5 shows the reductions in government subsidy to local bus services which have taken place in London and in the English Metropolitan Areas. It clearly shows that substantial reductions in subsidy have been achieved throughout the areas. The reductions in the English Metropolitan Areas have been relatively gradual, whilst the reductions in London, during the mid-late 1990s in particular, are quite remarkable and would merit further, separate investigation.

Table 5 Subsidy to local bus services (£M, 1997/98 prices)

	London	English Metropolitan Areas
1985/86	235	363
1987/88	164	194
1989/90	113	135
1991/92	187	129
1993/94	65	111
1995/96	32	106
1997/98	1	98
% Change (1985/86-97/98)	-99	-73

Source: Department of the Environment, Transport and the Regions

Note:

London figures for 1992/93 and for 1993/94 reflect changes in preparation for the privatization of LBL's buses; and

Subsidy in London from 1994/95 onwards came from London Transport rather than directly from government.

4. The Demand for Bus Travel

4.1 Overall Trends

As has been mentioned earlier, the demand for bus travel was in decline during the 1970s and early 1980s, prior to the regulatory reforms. For example, bus passenger journeys in London fell by almost a third during the 1970s and early 1980s. Table 6 shows the trend in bus passenger journeys since 1980. It can be seen that demand grew slightly during the early 1980s, immediately prior to the regulatory reforms, in both London and in the English Metropolitan Areas. It further shows that, in London, bus passenger journeys grew by 24% between 1985 and 1997/98. In contrast, bus passenger journeys decreased by 38% in the English Metropolitan Areas.

Table 6 Passenger journeys on local bus services (Millions)

	London	English Metropolitan Areas
1980	1181	1981 *
1985/86	1152	2068
1990/91	1178	1547
1995/96	1205	1292
1997/98	1294	1237
% Change (1985/86-97/98)	+24	-38

Source: Department of the Environment, Transport and the Regions

From this it appears that the competitive tendering system in London has been much more successful than complete deregulation elsewhere in Britain. However it has been agreed that this difference may be explained by the other differences between London and other cities noted above. To explain this we made more disaggregate

comparisons of trip rates. We have calculated average trip rates for different socio-economic groups and journey purposes for London and the British Metropolitan Areas. The data analysed comes from the 1985/86 survey, immediately prior to bus deregulation outside London and the same year in which the first bus tenders were awarded in London, and from the 1995/97 survey, the most recent data set which was available to the project. Note, the NTS metropolitan areas include Strathclyde but do not include South Yorkshire and therefore are not directly comparable with other references within this paper to ‘the other six English Metropolitan Areas’

4.2 Bus Trip Rates

Table 7 shows average weekly bus trip rates in London and in the British Metropolitan Areas. It can be seen that in 1985/86 the average number of bus trips per week made by people living in London was 2.27, as compared with 3.34 in the British Metropolitan Areas. In 1995/97, the bus trip rate in London had increased marginally to 2.30, whilst the trip rate in the British Metropolitan Areas had decreased by 29% to 2.36. Interestingly, this marginal increase in London as a whole is the balance of contrasting changes in inner and outer London. Average bus trip rates of people living in Inner London fell by 15% whilst those of people living in Outer London rose by 3%. At the same time however, the sample sizes for Inner and Outer London residents changed in such a way as to give higher weight to the decreased bus trip rates of Inner London residents. There is, therefore, some possibility that the bus trip rate for London as a whole is under-estimated by the NTS.

Table 7: Average bus trip rates by area

	London	Inner London	Outer London	British Metropolitan Areas
1985/86	2.27	3.29	1.90	3.34
1995/97	2.30	2.81	1.97	2.36
% Change	+1	-15	+3	-29

4.3 Bus trips by income

Table 8 presents average bus trips per week made by residents of London and of the British Metropolitan Areas broken down by different income groups. In both London and in the metropolitan areas the lowest income groups have the highest bus trip rates. However, the decline in trip rates as income increases is much more marked in metropolitan areas than in London, both prior to and since the reforms of the mid 1980s; thus, whilst the bus trip rate of people with incomes of less than £5000 living in the metropolitan areas is substantially higher than that for the same income group living in London, the bus trip rate for people with an income of £15000-20000 living in the metropolitan areas is less than that for people with an income in excess of £25000 living in London, irrespective of whether we consider 1985/86 or 1995/97 statistics.

Table 8 Bus Trip Rates by Income Group

	less than £5000	£5,000- 9,999	£10,000- 14,999	£15,000- 19,999	£20,000- 24,999	£25,000 or more
London						
1985/86	2.93	2.3	1.25	1.5	0.84	0.71
1995/97	3.02	3.03	2.39	1.53	2.06	1.48
% Change	+3	+32	+91	+2	+145	+108
Metropolitan Areas						
1985/86	4.12	2.87	1.24	0.52	0	0
1995/97	3.49	2.69	1.35	0.97	0.38	0.87
% Change	-15	-6	+9	+88

In London, bus trip rates amongst all income groups show an increase between 1985/86 and 1995/97, though the statistically significant (at the 10% level) increases are those for people with incomes of £5000-£9999 and of £10000-14999. In Outer London, statistically significant increases amongst these groups are mirrored, but the most substantial increase is amongst upper-middle income earners - those with incomes between £20000 and £24999 – whose average weekly bus trip rate increases from 0.14 to 2.15.

In the British Metropolitan Areas, bus trip rates amongst the two lowest income groups show a decrease over the period, whilst rates amongst the three higher income groups show an increase. However, only the decrease amongst the lowest income group, less than £5000, is statistically significant.

4.4 Bus trip rates by age

Table 9 shows average bus trips per week made by residents of London and of the British Metropolitan Areas broken down by different age groups. The overall pattern of bus trip rates by age group is very similar for both London and the British Metropolitan areas in 1985/86 and shows the youngest two age groups, under 19 and 20-29, to have bus trip rates higher than the average for that area (and the 20-29 age group to have a higher rate than the under 19 age group), the next three age groups, 30-39, 40-49 and 50-59, to have bus trip rates lower than the average for that area and then the top age group, over 60, to have bus trip rates higher than the average for that area. This pattern also appears to hold for London in 1995/97. However, in the British Metropolitan Areas in 1995/97, this pattern breaks down such that bus trip rates decline through the first four age groups and show a slight increase amongst the 50-59 age group. Rates are highest amongst the over 60 age group, the only group for which rates are higher than the average.

Table 9 Bus trip rates by age group

	19 years or less	20-29	30-39	40-49	50-59	60 years or more
London						
1985/86	2.33	2.76	1.46	1.93	2.14	2.72
1995/97	2.19	2.44	2.12	2.24	1.86	2.82
% Change	-6	-12	+45	+16	-13	+3
Metropolitan areas						
1985/86	3.45	3.79	2.66	3.13	2.87	3.65
1995/97	2.15	1.89	1.78	1.49	1.7	3.41
% Change	-38	-50	-33	-52	-41	-7

In London, bus trip rates amongst the middle two and top age groups, 30-39, 40-49 and over 60, show an increase between 1985/86 and 1995/97; the other three age groups each showing a decrease. However, the only statistically significant change is the increase amongst people in the 30-39 age group. Looking separately at Inner London, there is a substantial and statistically significant decrease in the weekly bus trip rate for 50-59 year-olds from 3.78 to 2.05.

In the British Metropolitan Areas, bus trip rates amongst all age groups show a decrease between 1985/86 and 1995/97 and all except the decrease amongst the over 60 age group are statistically significant.

4.5 Bus trip rates by gender

Table 10 presents average bus trips per week made by residents of London and of the British Metropolitan Areas broken down by gender. It shows that trip rates amongst women are higher than those amongst men throughout. The female trip rate in the British Metropolitan Areas is now similar to that in London, where as the trip rate amongst males is now lower in British Metropolitan Areas than it is in London, following significant falls in both female and male bus trips in the metropolitan areas.

Table 10 - Bus trips by gender

	Male	Female
London		
1985/86	1.95	2.57
1995/97	2.02	2.56
% Change	4	-1
British Met Areas		
1985/86	2.82	3.81
1995/97	1.78	2.57
% Change	-37	-32

Thus, in London the weekly bus trip rates for men and for women are both fairly similar in 1985/86 and in 1995/97, where as in British Metropolitan Areas rates for both are almost a third lower in 1995/97 than they were in 1985/86.

4.6 Bus trip rates by socio-economic group

Table 11 shows average bus trips per week made by residents of London and of the British Metropolitan Areas broken down by socio-economic group. It shows that, both in 1985/86 and 1995/97 in London, the lowest trip rates are amongst professional groups, followed by skilled manual groups, then followed by white collar groups, with semi and non-skilled manual groups having the highest trip rates. The same pattern is shown for British Metropolitan Areas in 1995/97, though in 1985/86 in British Metropolitan Areas white collar groups exhibited the highest trip rates, exchanging places with semi and non skilled manual groups.

Table 11 Bus trip rates by socio-economic group

	Professional	White collar workers	Skilled manual workers	Semi-skilled and unskilled manual workers	Other
London					
1985/86	1.31	2.65	1.86	3.3	2.07
1995/97	1.48	2.7	2.43	3.55	1.9
% Change	13	2	30	8	-8
Metropolitan areas					
1985/86	1.69	4.21	3.21	3.81	2.8
1995/97	0.98	2.4	1.94	3.46	1.9
% Change	-42	-43	-39	-9	-32

In London, trip rates amongst all four socio-economic groups increase between 1985/86 and 1995/97, though none of the increases are actually statistically significant. In contrast, trip rates amongst all four socio-economic groups in British Metropolitan Areas decrease between 1985/86 and 1995/97, with all but the decrease amongst semi and non-skilled groups being statistically significant.

4.7 Bus trip rates by car ownership

Table 12 shows that, both in 1985/86 and in 1995/97 and in both London and the British Metropolitan Areas, trip rates decline markedly as household car ownership increases.

Table 12 Bus trip rates by number of household cars in London and the Metropolitan Areas

	None	One	Two or more
London			
1985/86	4.33	1.56	1.16
1995/97	4.03	1.69	0.68
% Change	-7	9	-41
British Met Areas			
1985/86	4.81	2.23	1.44
1995/97	4.4	1.32	0.59
% Change	-9	-41	-59

In London, trip rates amongst the two plus car households declined significantly between 1985/86 and 1995/97, alongside more minor changes amongst no and one-car households. Weekly bus trip rates for 2 plus households also fell significantly in Inner London, from 2.15 to 0.72. In contrast, there were statistically significant decreases in trip rates amongst all three categories in British Metropolitan Areas, with the decreases amongst one and two plus households being quite large in absolute terms.

5. Assessment

The links between travel demand trends and regulatory and organisational reform of public transport markets are not direct or straight forward. The choice of regulatory regime and organisational structure can directly effect a range of factors such as price, quality, stability and quantity supplied, as well as the level of competition which can, itself, have further impacts on price, quality, stability, quantity supplied and costs. It is as a consequence of its impacts on this range of different factors that regulatory and organisational reform impacts on demand. Travel demand is also affected by other, more exogenous, factors such as population, land-use, the price and availability of alternative modes and alternatives to travelling and people's incomes. With all of these factors impacting at once on travel demand trends, it is extremely difficult to separate out the different effects.

We have sought to compare London, where the bus market is regulated through a system of franchises and privately owned, with the English Metropolitan Areas, where the bus market is deregulated and privately owned. However, it is important to stress that privatisation and a downward pressure on public sector budgets took place, more or less, in parallel with the regulatory changes in London and the rest of Britain. Furthermore, many of the exogenous factors relating to London are quite different to those for elsewhere, particularly its population, population density and car ownership growth. Whilst this makes comparisons difficult, we have sought to do so, stating caveats where necessary.

Bus operating costs reduced significantly both in London and outside of London following the regulatory changes of the mid-1980s. It is difficult to know whether or not these cost reductions facilitated the corresponding reductions in public subsidy to the bus industry or whether the significant reductions in subsidy would have taken

place anyway. However, in the absence of the cost reductions brought about by the reforms, there would have been a risk that reduced government funding would have led to decline of services and/or greater increases in fares and thus loss of bus travel demand.

In London these cost reductions were achieved at the same time as increases in the demand for bus travel, whilst outside of London cost reductions were accompanied by reductions in bus travel demand. Corresponding to this, our NTS analysis has shown that, during the decade following the regulatory reforms, the average bus trip rate in London increased slightly, whilst it decreased significantly in the British Metropolitan Areas. Furthermore, our analysis has shown that trip rates amongst some of the lower income groups and amongst people in their thirties in London increased significantly, whilst they decreased significantly amongst the lowest income group and amongst all adults less than 60 years old in the British Metropolitan Areas. Bus trip rates for both men and women and for all socio-economic groups in London remained relatively unchanged in London, whilst trip rates for men, for women and for professional, white collar and skilled manual workers in British Metropolitan Areas all decreased significantly. With respect to car ownership, only amongst households with 2 or more cars did the bus trip rate decrease significantly in London, whilst trip rates for all three car-ownership classes decreased significantly in the British Metropolitan Areas

Our analysis also starts to show some interesting differences between weekly bus trip rates in Inner and Outer London. In Inner London the average bus trip rate fell, whilst in Outer London it increased slightly. Firstly, in Outer London trip rates increased significantly amongst the lower income groups (as in London as a whole) and amongst the upper-middle income group (£20000-£24999). In Inner London trip rates amongst those in their fifties and amongst 2 plus car households decreased significantly.

A range of reasons may be put forward as to why London buses have performed as well as they have over the past 15 years. Mackie (2001) puts forward the following:

- I. the low base in the early 1980's
- II. buoyant economic conditions
- III. limits on private car use in terms of parking cost and availability and congestion
- IV. the availability of 1 day and longer period multi modal tickets known as travelcard and use of bus in multi-modal trips
- V. continued free concessionary travel for elderly and disabled people.

The external conditions were undoubtedly favourable. However, the ability to preserve and further develop a radical ticketing policy within an integrated system was also key. Tyne and Wear operated a similar zonal travelcard covering bus and metro in the early 1980's, however, some benefits were lost at deregulation when the buses began to compete on metro routes.

It is possible to speculate that the differences in cost and demand trends are due in part to the different regulatory regimes. However, given the important differences between London and the British Metropolitan Areas in respect of levels of population density, car-ownership, income, parking availability, congestion, availability of complementary rail and underground provision, information provision and integrated

ticketing and fares concessions, it has not proved possible to be conclusive on the extent of the influence of the regulatory reforms. Further research, which attempts to allow for these differences using more complex modelling techniques, may prove to be more fruitful.

More detailed examination of the evidence shows that the success of bus in London is strongly linked to its holding on to its market amongst higher income middle aged persons, and that this in turn is linked to much lower levels of car ownership growth amongst such people in London than in other cities. Whilst the availability of a high quality public transport network (rail as well as bus) and of travelcards may well have been important factors in these trends, so certainly must congestion and parking difficulties. On the other hand the rapid growth of car ownership in other cities may have been also linked to declining public transport quality. Further research on the importance of public transport quality as a determinant of car ownership growth, should help us reach more firm conclusions on the relative success of the competitive tendering regime in London and complete deregulation in other cities in Britain.

References

Department for the Environment, Transport and the Regions (1999) Focus on Public Transport, DETR, London

Department for the Environment, Transport and the Regions (1999) Transport Statistics for London, DETR, London

Department for the Environment, Transport and the Regions (1999) Transport Statistics for Metropolitan Areas, DETR, London

Fairhurst M. & Edwards D. (1996) Bus Travel Trends in the UK, Transport Reviews, Vol. 16, No. 2, 157-167

Flemming N. & Hyde C. (1998) Planning Modal Shift to Public Transport, paper presented at PTRC Summer Annual Meeting, Seminar F (PT Planning and Operations)

Glaister S. (1991) UK bus deregulation, the reasons and the experience, Investigaciones Economicas (segunda epoca), Vol XV, no 2, pages 285-308

Glaister S. & Beesley M. (1991) Bidding for tendered bus routes in London, Transportation Planning and Technology, Vol. 15, pp. 349-366

Grayling T., & Glaister S (2000). A new fares contract for London. Institute for Public Policy Research, London.

Heseltine P.M. & Silcock D.T. (1990) The effects of bus deregulation on costs. Journal of Transport Economics and Policy. Vol24, Part3, pp 239-253.

Kennedy D. (1995) London Bus Tendering; the impact on costs, International Review of Applied Economics

London Transport Buses (1999) The Bus Tendering Process. London Transport, London

London Transport Market Planning (1998) Market Report. London transport, London

London Transport Planning (1998) Buses in London: A comparison with the rest of Great Britain.

Mackie, P. & Preston, J. (1996) The Local Bus Market : A Case Study of Regulatory Change. Avebury, Aldershot.

Mackie P.J. (2001) Principles of Public Policy for Bus Services. in Any More Fares? Delivering Better Bus Services. (ed) Grayling T. Institute for Public Policy Research. pp19-39.

White P. (1997) What conclusions can be drawn about bus deregulation in Britain? Transport Reviews Vol. 17, No 1 pp 1-16.

Wolmar C. (1999) Commuter 2000, part 4: Buses, London Evening Standard, 21st January 1999

bm/comptender.doc